

■ SUPPLY MANAGEMENT

material for management training in agricultural co-operatives

*TRAINER'S MANUAL*

international labour office, geneva

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by Malcolm Harper



**MATCOM**  
**Material and techniques for cooperatives management**  
**training**

The MATCOM Project was launched in 1978 by the International Labour Office, with the financial support of Sweden. In its third phase (1984-1986) MATCOM is financed by Denmark, Finland and Norway.

In collaboration with cooperative organizations and training institutes in all regions of the world, MATCOM designs and produces material for the training of managers of cooperatives and assists in the preparation of adapted versions for use in various countries. MATCOM also provides support for improving the methodology of cooperative training and for the training of trainers.

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Preface

This training package is one of a number of training packages designed by the ILO-MATCOM Project to assist people who plan or carry out training for the managerial staff of agricultural co-operatives in developing countries.

The training provided under this training package, as well as under the other packages in this series, is based on a thorough analysis of:

- (1) the tasks and functions to be performed in agricultural co-operative societies in developing countries;
- (ii) the common problems and constraints facing the effective performance of these tasks and functions.

The result of this analysis is reflected in the MATCOM "Curriculum Guide for Agricultural Co-operative Management Training". The Guide contains syllabuses for 24 management subjects and MATCOM has produced training packages, similar to this manual, for the following subjects:

- Collecting and Receiving Agricultural Produce
- Transport Management
- Storage Management
- Marketing of Agricultural Produce
- Supply Management
- Rural Savings and Credit Schemes
- Staff Management
- Financial Management
- Cost Accounting and Control
- Risk Management
- Project Preparation and Appraisal
- Work Planning
- Export Marketing
- Management of Larger Agricultural Co-operatives

For more information on the above training material, please write to:

The MATCOM Project  
c/o CO-OP Branch  
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THE TRAINING PROGRAMME1. Target Group

Target groups for this training programme on "Supply Management" are managers and assistant managers of agricultural co-operative societies who run or plan to run a co-operative farm supply service.

Co-operative officers or extension staff supporting the above target groups could also benefit from the programme.

2. Aim

The aim of the programme is to train people to manage a co-operative farm supply service effectively.

In particular, the programme will enable trainees:

- to define the role and describe the functions of an agricultural co-operative farm supply service;
- to assess the costs and benefits of these functions;
- to put together the best possible stock selection;
- to select the right suppliers;
- to calculate and order economic quantities;
- to design and put into practice suitable systems for ordering goods, receiving goods, inspecting goods and for authorising payments for goods;
- to assess, modify or set up simple and effective storage facilities for farm inputs;
- to devise and put into practice appropriate systems for controlling and counting stocks;
- to decide how to issue stock and to value issues and stockholdings in the most appropriate way;
- to assess market requirements for farm inputs and to design, put into practice and evaluate effective promotion strategies aimed at encouraging members to buy the farm inputs stocked by their society.

3. Use

The course as described in this manual can be used for a specialised course on supply management. The complete programme, or individual sessions or parts of sessions, can also be incorporated in the curriculum for a more comprehensive management training programme.

4. Duration

The complete programme, as described in this manual, consists of 28 sessions. Session times vary from 1 to 3 hours. The total programme will take approximately 55 hours, or 8 - 10 days, depending on the qualifications and experience of the trainees and the hours worked each day. The time may well be exceeded, and each instructor must decide on the likely duration in view of local conditions.

5. Training Approach and Methods

The programme is based on the assumptions that training is expensive and that money for co-operative management training is scarce. Therefore, it looks upon training as an investment, and unless the training yields results, the return on the money invested in it will be nil:

On their return from the training programme, the trainees should be able to show concrete results of improved management. In order to prepare and equip the trainee to achieve this, the programme has adopted a highly active learning approach through the use of "participative" learning methods.

Trainees will not learn about supply management in a general and passive way. Their day-to-day management problems have, as much as possible, been translated into realistic case studies and other problem-solving exercises. Trainees (working in groups and on their own) will learn by solving these problems with the necessary assistance and guidance from the trainer, who will act more as a "facilitator" of learning than as lecturer.

Every trainee has some ideas and suggestions from which the others can learn. This material is intended to allow and encourage every

trainee to contribute as much as possible from his own insights and experience, so that all will go away with the accumulated knowledge that each brought to the programme.

This sort of shared learning is in fact almost always more important than the knowledge that you, the instructor, or the material itself, can contribute. You should treat each trainee as a source of ideas and suggestions which are at least as valuable as your own, and the material is designed to help you draw out, or "elicit", these contributions.

The built-in "action commitment" at the end of the programme will give each trainee the opportunity of using the knowledge and expertise of his colleagues in the training programme in order to find a concrete and acceptable solution to a specific supply problem he is faced with - a solution to which the trainee will commit himself for implementation.

## 6. Structure

The programme is divided into ten TOPICS and each topic is covered by a number of SESSIONS (see the table of contents on page IX).

The following material is provided for each session:

- a session guide for the trainer (yellow pages), giving the objective of the session, an estimate of the time needed and a comprehensive "plan" for the session, including instructions on how to conduct the session;
- handouts (white pages) of all case studies, forms, etc., to be reproduced for distribution to the trainees.

## 7. Adapting the Material

Before "using" the programme in a real training situation, it will probably be necessary to adapt it. This can be done as follows:

Read through the material and decide whether:

- the programme can be run as it is;
- only certain topics or sessions should be used;
- new topics and sessions should be added.

Your decision will depend on the training needs of your trainees and the means you have at your disposal.

Carefully read through the sessions you have decided to use. Check the subject matter in both the session guides and the handouts. Modify them to include local currencies, names, crops and so on. Such adaptation will help trainees identify themselves more easily with the people and the situations described in the handouts and will increase the impact and effectiveness of the training programme.

Do not feel that this manual is Like a book which contains the only answers. It is merely a collection of suggestions and ideas, which you must adapt, modify, use or reject as you think fit. The best evidence that you are using it properly will be the amount of changes, additions and amendments you have yourself written into this copy.

#### 8. Preparing the Handouts and Other Learning Aids

Handouts constitute an important part of the training material used in the programme. They can be reproduced from the original handouts supplied in the ringbinder, after the necessary adaptation has been made. Reproduction may be done using whatever method is available: stencil, offset printing, photocopy, or carbon copies or handwritten copies if no other method is available.

The only item of training equipment which is absolutely essential is the chalkboard.

Some suggestions for visual aids are given in the session guides. If flipcharts or overhead projectors are available, you should prepare these aids in advance. If they are not available you can still use the chalkboard.

Trainees should be informed in advance to bring examples of the following documentation from their society:

- original orders, bin cards, suppliers' delivery notes, invoices and statements, goods inspection notes, society payment advice notes (see Session 5.1);

- blank bin cards (see Session 7.1);
- societies' cash sale tickets, receipt forms and invoices (see Session 8.3).

The pre-course questionnaire should be sent to the trainees in advance. Trainees should be asked to complete it and hand it in at the beginning of the training programme.

#### 9. Preparing Yourself

Some trainers may feel that material of this sort means that they need only spend a few minutes preparing for each session. This is not the case.

You should go through the following steps before conducting any course which is based wholly or in part on this material:

1. Read it carefully; be sure you understand the content, and that you can envisage what is intended to happen in the classroom.
2. Work through all the calculations; be sure that you understand them completely and try to predict the errors that trainees are likely to make, and the different answers which may not be wrong, but which will be worth following up.
3. Work through the case studies yourself, and try to predict all the possible analyses and answers which trainees may come up with.
4. Look up and write down on the material itself, as many local examples as you can to illustrate the points that are raised.
5. Plan the whole session very carefully; try to predict approximately how many minutes each section of the session is likely to take, and make the appropriate modifications to fit into the time that you have available. Do not take the suggested time at the beginning of the session too seriously.

10. Conducting the Programme

While using the material, you should try to observe the following guidelines:

1. Arrange the seating so that every trainee can see the faces of as many as possible of the others; do not put them in rows so that the only face they can see is your own.
2. Be sure that the session is clearly structured in the trainees' minds; outline the structure at the beginning, follow it or say that you are diverging from it, and summarize what has happened at the end.
3. Bear all the learning points in mind, and do not forget the job-oriented objectives of the session.
4. Be flexible, do not follow the material slavishly and be prepared to change the approach, depending on what trainees, themselves, suggest.
5. Avoid, whenever possible, telling the trainees anything; in a successful session all the points will have been elicited from them by skillful questioning.
6. If you fail to elicit a particular answer from the trainees, it is your fault not theirs. Persist, by asking the same question in different ways, by hinting and so on, and only make the point yourself if all else has failed.
7. Use silence as a weapon; if nobody answers a question, be prepared to wait for 20 or 30 seconds in order to embarrass somebody into making an attempt.
8. Avoid talking yourself. Trainees' discussion and suggestions should occupy around three quarters of the total time; ask, listen and guide rather than talk. (The more you yourself talk, the more you are revealing your own insecurity and ignorance of the subject, in that you are not willing to risk questions or comments with which you cannot deal.)
9. Never ridicule a trainee's answer or suggestion; there is bound to be some merit in it somewhere, and the very fact that he or she has put forward a suggestion is commendable.

10. If you cannot answer a trainee's question, or comment on a suggestion, (or even if you can) ask another trainee to answer or make a comment. You are the facilitator, not the source of knowledge.
  11. Write trainees' own words on the chalkboard whenever possible; do not follow the words in the material, even if they are more precise.
  12. Be prepared to act as "Devil's Advocate" by supporting the opposite view to that held by the majority of participants, there are usually no right or wrong answers to management questions, and trainees must see and understand both sides of every issue.
  13. If trainees appear to be following a quite different track from that suggested in the material, do not dismiss this out of hand; it may be as useful or more so.
  14. Call on the silent and, if necessary, silence those who talk too much.
  15. Be sure that everybody understands what is going on; do not allow the discussion to be taken over by the few who understand.
  16. Be dynamic, lively and active. Move around, walk up and down the classroom, and generally keep everyone alert by your physical activity.
11. After the Course

Note down each trainee's action commitment. Be sure to contact every trainee, in person or at least by letter, about six months after the end of the course to find out how they have managed to apply what they have learned, and how well they are implementing their action commitments. If they failed, it is not they who were at fault, but the course. Either the training was ineffective, the trainees were poorly selected or you failed to recognise problems which might prevent them from applying what they learned.

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Pre-course Questionnaire

Name: .....

Society:.....

Job title:.....

Brief description of your responsibilities:

.....

.....

.....

What parts of your job do you enjoy the most?

.....

.....

.....

What parts of your job do you find the most difficult?

.....

.....

.....

Please complete the following sentence:

As a result of attending the course on Farm Supply Management I hope that I shall be able to.....

.....

.....

# the functions of a co-operative farm supply service

Pre-course Questionnaire

Session 1.1 Introduction

Session 1.2 Farm Supply :  
The Farmers' Point of View

Session 1.3 Farm Supply :  
The Suppliers' Point of View

SESSION 1.1

INTRODUCTION

Objective: To demonstrate the importance of effective co-operative farm supply service, and to identify sources of expertise within the group.

Time: 1 - 2 hours.

Material Completed pre-course questionnaire, timetable and list of trainees.

Session Guide:

- 1) If a prominent visitor is to open the course he or she should, if possible, be asked to stress the national importance of effective farm supply services, and to point out that individuals such as trainees can, on their own, bring tremendous benefit to large numbers of farmers. They should stress that government pronouncements and policies can only be useful if they are implemented by society management in the field.
- 2) Ensure that all administrative questions are dealt with; matters of accommodation, expenses, transport, rooms for private study or similar problems should all be settled now, so that trainees are not distracted from the purpose of the course.
- 3) Point out that a training course such as this one is an investment; attempt to estimate its total cost, including trainees' salaries while in training. If this sum of money were available to them, ask trainees to suggest how they might use it to improve their own farm supply service. They may mention purchase of a vehicle, hiring more staff, holding more stocks, offering lower prices or some other benefit to members. Point out that unless the value of the benefit to members from this training course exceeds the cost of the course, the money would have been better spent as suggested.

Trainees should therefore continually relate what they are learning to their own jobs; if what they are learning seems irrelevant, or

if they do not understand how to use it, they must say so, and the course will be changed accordingly.

- 4) Briefly go through the timetable, stressing that trainees will be required to contribute and not merely to listen; people learn not by sitting and listening, but by participating and doing things themselves. Everyone will be expected to play his or her part in this way. The learning methods may be unfamiliar to some trainees; if they follow instructions and use their initiative and imagination, they will enjoy the course, possibly more than others they have attended, and will learn more that they will be able to apply on their return home.
- 5) Ask each trainee to summarize his prior training and experience, and to state what he hopes to be able to do as a result of attending this course. Refer to the pre-course questionnaire if necessary. Stress that even if some trainees only have little knowledge or experience of farm supply the group as a whole is an extremely powerful source of expertise and knowledge. Identify any particular gaps and ensure that the respective subjects are stressed in the timetable.
- 6) warn trainees that every individual will be expected to produce and commit himself to an action plan at the end of the course. This will include:
  - A statement of a problem in his society.
  - A brief description of a specific plan of action designed to solve the problem.
  - Ideas for how the solution will be "sold" to superior and subordinate staff, and to the committee and members if necessary.
  - A specific description of exactly what the trainee hopes to have achieved by a certain specified date, within six months from the end of the course.

Trainees' success in implementing their plans will be assessed at the time indicated in their plans. The course will be evaluated according to their success.

SESSION 1.2

FARM SUPPLY: THE FARMERS' POINT OF VIEW

Objective: To enable trainees to identify the basic needs of farmers which are, or are not, satisfied by a farm supply service.

Time: 1 - 2 hours.

Material: Micro cases A to G.

Session Guide:

1) Distribute the micro cases and ask trainees to identify the failings of the farm supply system in each case.

2) Allow trainees up to 30 minutes for this; discuss their conclusions, and elicit a list covering the following points:

Case A - The correct product was not available at all.

Case B - No credit was available.

Case C - The product was only available at a great distance.

Case D - The product was available at the wrong time.

Case E - The product was in the wrong package size.

Case F - There was no effective information on how to use the product.

Case G - The product was too expensive.

3) Ask trainees, in groups, to describe an ideal farm supply system, from the farmers' point of view, for a particular product which is widely used in their area. This may be fertiliser, seeds, insecticide or any other similar item.

4) After allowing up to 30 minutes for this, ask each syndicate to list its descriptions. Details will differ, but the descriptions should include the following points:

- the product should be exactly right for the land, farm, methods and ability of each individual farmer;
- the product should always be available;
- the product should be available to the farmer at a convenient location which he will visit in any case. If necessary, it should be delivered to his farm;
- the farmer should only have to pay for the product when the crop for which the product has been used, has been harvested, sold and paid for;
- the product should be provided in packages which are convenient for all farmers;
- the farmer should be given complete information on how to use the product, in a form which he can understand and apply without difficulty;
- the price should be as low as possible, i.e. very little higher than the wholesale price paid to the manufacturer by the co-operative supply organisation.

5) Ask trainees to give examples of cases when the farm supply service provided by their society fails to satisfy these specifications. (Do not at this stage discuss the possibly valid reasons for this.)

Farm Supply Micro Cases

Case A

The hill farmers of region A were keener than anybody to use the new hybrid maize; their holdings were stony and dry and they desperately needed the extra income which was promised. The results, however, were disappointing. The seeds which were available were right for most farmers in the district where there was more water, but the yield in the dry upland soil was even less than that from traditional varieties, in spite of the extra cost of inputs.

Case B

Farmer B was impressed by all that he had seen and heard about the advantages of using fertiliser. There was no doubt that it would more than double his yield and he was sure that he would be able to earn enough extra money to pay for the fertiliser and to have over \$100 extra for himself. He did not buy the fertiliser however; planting time coincided with "the hungry season" when he barely had enough money to feed his family; he could not afford to buy fertiliser at that time of the year, however much extra crop it might provide him with some six months later.

Case C

Farmer C looked at his dead cow and wished he had taken the veterinary officer's advice; on the other hand, he was not sure how he could have been expected to do so. The veterinary officer had said that anyone who had the new hybrid cows should spray them twice a week to avoid tick fever. Sprayers, and the necessary chemical, could only be found in the capital city, a full day's journey away by bus. Farmer C had tried to find time for the trip, but the disease struck first, and he lost his cow.

#### Case D

The farmers in D were very disappointed - their new crop had to be sown immediately after the rains or the seeds would never germinate. They tried to buy seeds as soon as the rains started, but they were told that supplies would arrive "shortly". They prepared the ground, and continued to ask for seeds, but the rains stopped and the soil dried out, and still the seeds had not arrived. Eventually they were delivered, but by that time it was too late - the few farmers who did plant lost their seeds, and everyone went hungry the following season.

#### Case E

"Why do rich people always have the luck?" The poor farmers of E knew that they should have sprayed their crops, but the spray could only be bought in 200 litre drums. Their farms were scattered and not very large, and only the biggest farmers could possibly use 200 litres in a season. The people with small holdings had no way of buying the chemical, and they watched their crops wither from disease while the richer farmers did even better than before.

#### Case F

Each seed needed about a tablespoonful of fertiliser, placed in a separate hole close to the seed when it was planted. The ministry official told some farmers about this, and told them to pass the message on. The fertiliser bags had the instructions printed on them in English. Most farmers either put fertiliser in the same hole as the seed, or scattered it on the surface of the ground after planting. In both cases it was wasted, and the farmers refused to waste their money on new things of this sort ever again.

Case G

It was obvious that fertiliser would increase yields dramatically, and everyone knew how to use it. Farmers in the region could buy farm supplies on credit and many of them bought fertiliser. One or two of the better educated farmers were more cautious; they calculated how much extra money they would get from the extra yield, and compared that with the actual price charged for fertiliser. They did not rely on the figures used by the ministry official. When the harvest was sold, the farmers who had bought fertiliser were very disappointed - it had cost so much that they were all worse off than if they had never used fertiliser at all.

Assignment :

Identify the failings of the farm supply system in each case.

SESSION 1.3FARM SUPPLY: THE SUPPLIERS' POINT OF VIEW

Objective : To enable trainees to identify and estimate "marketing" costs and to describe the cost implications of a supply service which fully satisfies the members' needs.

Time : 2 - 2 1/2 hours.

Material : Tape dialogue.

Session Guide :

- 1) Remind trainees how the previous session made them look at a supply service through the eyes of the farmer, i.e. what "services" a supply service should render to be ideal for the farmers. Tell trainees that in this session they will now be examining farm supply from the point of view of the supplier, which is the co-operative in our case. Tell them that the following dialogue will help them to do so.
- 2) Play, read out or enact the dialogue. Pause at each "Bleep" and ask trainees to write down the service which is being provided, and the accompanying cost involved.
- 3) If necessary repeat the dialogue, and then ask trainees to read out their notes for each section of it. The words used will differ, but the basic content should be as follows:

<u>Bleep</u>	<u>Service</u>	<u>Cost</u>
1	Wide stock variety	Administrative and stocking costs.
2	Generous credit	Interest costs and risk of bad debts.
3	Convenient locations and individual delivery	Transport and storage building costs.
4	All items available at all times	Stocking and finance costs, and risk of deterioration.

<u>Bleep</u>	<u>Service</u>	<u>Cost</u>
5	Wide range of package sizes	Storage and administrative costs.
6	Full personal information about all products	Staff training and wage costs.
7	Lowest prices	Small surplus to cover supply service costs.

4) In other words, it costs money to supply the farmer:

- with the right input
- at the right time
- in the right place
- in the right package
- and with the right information.

5) Ask trainees to what extent they think these "marketing" costs of an input compare to the production costs of the same input. Take the example of fertiliser for instance, and ask trainees (in groups) to list and then attempt to cost the stages through which fertiliser must pass before reaching the place and conditions in which it is normally sold to the farmer.

A possible list could be as follows:

<u>Fertiliser</u> (per bag)	<u>Dollars</u>
Physical cost of product	10.00
Cost of bag and bagging	0.30
Cost of storage at factory	0.20
Manufacturer's cost of informing customers	0.30
Delivery to wholesaler	0.15
Manufacturer's profit	<u>0.50</u>
<u>Total cost to wholesaler</u>	11.45
Wholesaler's stocking costs	0.20
Allowance for cost of credit and risk of bad debts	0.20
Cost of delivery to retailer	0.15
Cost of obtaining orders from retailer	0.20
Wholesaler's profit	<u>0.50</u>
<u>Total cost to retailer</u>	12.70

Dollars

Cost of suitable premises	0.30
Labour costs	0.50
Allowance for losses and retailer's profit	<u>0.50</u>
<u>Total cost to the farmer</u>	14.00

Summarize the main marketing functions, regardless of who performs them:

Manufacture of physical product	10.00
Packaging	0.30
Storage	0.70
Credit	0.20
Transport	0.30
Information and service (including retail staff)	1.00
Profit	<u>1.50</u>
T O T A L	14.00

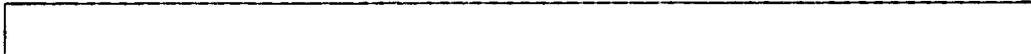
Stress that manufacturing alone does not produce a product in the complete sense of satisfying farmers' needs.

- 6) Ask trainees, in groups, to describe for a particular product, such as fertiliser or insecticide, an ideal supply service from the suppliers' point of view, i.e. a supply service which is cheap and simple to operate.
  
- 7) After some 30 minutes, ask each syndicate to read out their descriptions; details will differ, but the descriptions should include the following:
  - there should be only one variety of the product;
  - the product should only be available when most farmers are going to need it, and it should not be stocked at other times;
  - the product should be stocked in bulk, and farmers should arrange their own transport;
  - the product should be sold for cash;
  - the product should be available in one package size only;
  - the product should have clear instructions printed on the package, but members should not expect supply staff to provide training in how to use it;

- a generous gross margin should be added to the wholesale price of the product to allow for unexpected costs, to cover operating expenses and to redistribute to members later if possible.
- 8) This list and the similar list produced in the previous session (point 4) should now be compared. If possible, the two lists should be displayed on a chalkboard/OHP so that the contrast, point by point, can immediately be seen.
  - 9) For each aspect of supply service, draw a line as follows:

Extreme economy  
and simplicity

Perfect service  
to each member



Ask trainees to "place" the service provided by their society, for each aspect, along this line.

- 10) Stress that economy and simplicity of operation is in the interest of members, as is a perfect level of individual service. A society which loses money by providing "too good" a service will soon have to cease operations, and members will lose the service and their investment.
- 11) The management of a co-operative farm supply society must do two things.
  - Decide on the "optimum" level of service for each aspect and product, by balancing member needs for service with the need for economy.
  - Even more important, they must manage the supply service effectively, whatever level of service is selected, so that its cost of operation is kept to a minimum.
- 12) Show by reference to the timetable that the remainder of the training course is intended to help them to do these two things.

Tape Dialogue

Narrator: The auditor from the registrar's department is anxious to help the Bondo Farmers' Society; he met the secretary shortly after the accounts had been completed.

Auditor: This is very serious; your farm supply department is losing money so fast that the society will be bankrupt in another season.

Secretary: I know that's what the figures say, but I thought you'd found I had worked it out wrong; our members never stop congratulating the committee about the service they get, and we are held up as example for the whole region.

Auditor: Let's try to see where the money is going; first of all, do you really need to spend so much money on the office? What are all these people doing?

Secretary: Well, we buy hundreds of different things from tens of suppliers, and every order has to be dealt with properly. Our farmers don't all need the same things, you know, so we try to satisfy everyone by buying as wide a range as we can.

BLEEP 1

Auditor: Your interest charges seem to go up all the time. Why do you need to borrow so much money?

Secretary: Our members are poor - they can't afford to pay for things when they get them, so we let them wait until harvest time. Sometimes they are unlucky, so we have to wait another season or so. It is expensive, but we are giving our members what they need.

BLEEP 2

Auditor: I see, but look here - do you really need to have yet another vehicle? What is it used for?

Secretary: That's easy to explain; hardly any of our members have their own transport, and the buses won't take much baggage and they're unreliable. We deliver most of the bulky supplies direct to the farm, and the committee agreed that we should charge the same flat rate, without penalising those members who happen to live farther away.

BLEEP 3

Auditor: You talk about delivering things to farmers, but the amount you have in the warehouse never seems to go down; can't you keep your stock levels lower? This would reduce interest charges and other costs.

Secretary: The climate around here is very erratic, and every farmer has his own ideas on when he should sow, spray and so on. I want every member to be able to get what he wants, and when he wants it, and this means high stocks.

BLEEP 4

Auditor: What are all these "miscellaneous materials"?

Secretary: Oh, that is for some new shelving units we put up in the warehouse.

Auditor: What for?

Secretary: Some of our members have bigger farms, or more animals, than others, and they need different amounts of chemicals and so on. I find that we have to have several sizes of most things, ranging from small packages to large drums. This needs more space and more shelving, and my warehouse staff say that members still ask for package sizes we haven't got, so I expect we'll need even more.

BLEEP 5

Auditor: I should think your staff are trying to justify their existence. Why do you need so many people in the warehouse? You seem to be paying more than the minimum wage too.

Secretary: Deliberately, because our members expect, and get, more than average service because I want everyone in our warehouse to be able to explain exactly how to use every item we stock, and to be able to answer members' questions for them. Some farmers spend half a day or more in the warehouse and only spend \$5 or so; I know this is time well spent though, and I sometimes think our warehouse is the best agricultural college in the region.

BLEEP 6

Auditor: It seems to cost about as much as a university. Look at the top line though - your gross margin on farm supplies is barely higher than last year's, in spite of all the extra volume of sales you made.

Secretary: This society was set up to replace the private traders who used to rob our people through high selling prices, low buying prices and other forms of extortion. Our committee, and any of our members for that matter, are free to inquire what the society itself pays for supplies. They can remember the bad old days, and they make sure we add only a very small margin. I think they are right too, our job is to supply them with what they want at the lowest possible price.

BLEEP 7

# product selection

Session 2.1 How to find out what  
farmers need from a Co-operative  
Farm Supply Service

Session 2.2 Identifying and Filling Gaps

Session 2.3 What to Stock

SESSION 2.1

HOW TO FIND OUT WHAT FARMERS NEED  
FROM A CO-OPERATIVE FARM SUPPLY SERVICE

Objective : To enable trainees to select and apply appropriate methods for finding out about the needs of members.

Time : 2 - 3 hours.

Material : Case study.

Session Guide :

- 1) Tell trainees that this section will enable them to determine which products should be distributed by a co-operative supply service. This will be done in three steps:

Session 2.1 will teach them to select and apply appropriate methods for finding out about the needs of members.

Session 2.2 will give them the opportunity to interpret the results of applying such methods, i.e. it will allow them to actually determine which products members need from a co-operative supply service.

Session 2.3 will enable them to select from a list of products needed by members, those products which the co-operative supply service could distribute most economically.

- 2) Modify the case study so that it describes the type of membership needs which trainees are likely to have to satisfy.
- 3) Divide the group into syndicates of four to five members and distribute the case study; allow up to 40 minutes for their initial analysis.
- 4) Ask syndicate representatives to list the sources of information they have identified, and the advantages and disadvantages of

each. Their answers will clearly depend on their experience and the situation in their own area, but a possible set of answers is as follows:

Source of information	Advantages	Disadvantages
General meeting of members	<ul style="list-style-type: none"> <li>- All members have an opportunity to make suggestions.</li> <li>- Any complaints about items finally selected can be forestalled.</li> <li>- Large numbers of members can be contacted at one time.</li> </ul>	<ul style="list-style-type: none"> <li>- Attendance may be very low.</li> <li>- Attendance may not be representative of all members.</li> <li>- Meetings are infrequent.</li> <li>- Meetings may not be long enough.</li> <li>- A few members may dominate the meeting.</li> </ul>
The committee	<ul style="list-style-type: none"> <li>- Accessible to the secretary.</li> <li>- Elected by members to convey their views to the secretary.</li> <li>- Familiar with the area.</li> <li>- Better informed than the average member.</li> </ul>	<ul style="list-style-type: none"> <li>- The committee may not be genuinely representative of the membership.</li> <li>- Committee members may seek to satisfy their own personal interests.</li> </ul>
A survey of members	<ul style="list-style-type: none"> <li>- Genuinely representative of all members.</li> <li>- Totally objective.</li> <li>- Demonstrates concern to find out what members really need.</li> </ul>	<ul style="list-style-type: none"> <li>- Time consuming and expensive.</li> <li>- Results may be inconclusive since debate is not possible.</li> <li>- Members may not yet know about desirable inputs which they should be using.</li> </ul>
Ministry of Agriculture	<ul style="list-style-type: none"> <li>- Aware of the latest desirable farm inputs.</li> </ul>	<ul style="list-style-type: none"> <li>- May be remote from the realities of the farm area.</li> </ul>

Source of information	Advantages	Disadvantages
	<ul style="list-style-type: none"> <li>- Have access to national farm research data.</li> <li>- Extension staff should be in close contact with local farmers.</li> </ul>	<ul style="list-style-type: none"> <li>- May be difficult to contact or unwilling to co-operate.</li> <li>- May have an ideal rather than a realistic idea of what should be provided.</li> <li>- May overemphasise particular "pet" systems.</li> </ul>
Neighbouring societies already supplying inputs	<ul style="list-style-type: none"> <li>- Actual experience of co-operative farm supply.</li> <li>- Should be unbiased in their suggestions.</li> <li>- Likely to be easy to contact and willing to co-operate.</li> </ul>	<ul style="list-style-type: none"> <li>- Their region may be different.</li> <li>- Their own system may not be effective and may not satisfy farmers.</li> <li>- They may be jealous of their success or wish to extend their own membership area.</li> </ul>
A survey of private traders' stocks (with or without their knowledge)	<ul style="list-style-type: none"> <li>- In touch with farmers' needs.</li> <li>- A wide spread in the region.</li> <li>- Actually supplying goods to farmers at the moment.</li> </ul>	<ul style="list-style-type: none"> <li>- May resist inspection.</li> <li>- May provide an inefficient service at the moment.</li> <li>- May distort information provided.</li> </ul>
Manufacturers of farm inputs	<ul style="list-style-type: none"> <li>- Familiar with their own products.</li> <li>- Willing to help a potential customer.</li> <li>- Must be contacted for negotiations in any case.</li> </ul>	<ul style="list-style-type: none"> <li>- Biased in their own interest.</li> <li>- All products may not have local representatives.</li> </ul>

Compare and discuss syndicates' lists: how other sources of information from those listed above will be mentioned. It is important that trainees recognise that there is no single reliable source of information about rural farm needs or anything else. Attempt to agree on a common list of information sources if all trainees are from a similar area.

- 5) Ask syndicates to reconvene and to plan a programme to be undertaken by the secretary. They should list the sequence of activities recommended, including access to some of the above sources of information and others as they think fit, and should identify an object or task to be undertaken at each stage.
  
- 6) Allow trainees up to 30 minutes for this; reconvene the group and ask syndicate representatives to describe their plans. Compare their various solutions and discuss the merits and demerits of each. A possible plan might be as follows:
  - a) Tell the committee that the secretary is undertaking an inquiry into the farm supply needs of membership, and that the final recommendations will be put before them in due course. Do not ask for suggestions at this stage.
  - b) Obtain from the Ministry of Agriculture a list of requirements and amounts of input needed for a "typical" farmer in the society's membership area.
  - c) Survey a random sample of say 30 members, to obtain data on (1) what inputs they buy, (ii) what they need but cannot buy, and (iii) what problems they experience.
  - d) Compare "b)" with "c)" and produce a list which includes (1) current requirements and (ii) new items likely to be required in the future.
  - e) Make a brief survey of a number of private shops to determine (i) availability of trade, (ii) prices and (iii) terms.
  - f) If resources are scarce, eliminate items in lists produced at "d)" which appear adequately served by private traders.
  - g) Discuss the final list with other societies to compare findings and identify appropriate suppliers.
  - h) Discuss terms and prices with suppliers.
  - i) Present completed range and buying plan to committee for approval.
  
- 7) The final plan will clearly depend on syndicates' opinions and institutions and possibilities familiar to them. Point out that the gathering of information, like any other task, must be planned, and that a well-organised, smooth running, economical farm supply ser-

vice which fails to supply farmers with what they need is of little value.

- 8) Ask if any trainees have actually attempted to survey members' needs in a systematic way, in order to measure the demand for a proposed new service: "market research" is often suggested as the best way of obtaining such information, but the marketing text book approaches are not easily applied by small scale rural agricultural marketing co-operatives.
- 9) The results from a sample of about 30 members will give a reasonably accurate indication of the views of a whole society, provided that the 30 members are selected at random. Assume that a co-operative society has 300 members; the secretary wants to find out how much fertiliser these 300 members are likely to buy from the newly established co-operative farm supply service. He has the choice to make the survey among:
- the next 30 members to visit the society's office;
  - 30 farmers living nearest to the town or village centre;
  - 30 farmers known to be enthusiastic and progressive users of new ideas.

Assume that results from any one of the three surveys reveal that the total projected fertiliser demand from the 30 farmers surveyed is 60 tons. The secretary therefore estimates the demand for the whole society to be 600 tons. Ask trainees if they agree.

This would very likely be incorrect because the sample of 30 was not representative, or typical of members. Discuss methods of choosing samples, such as picking out names at random from a membership list.

- 10) Ask trainees to assume that the secretary of the Utopian Farmers' Society has decided to attempt to find out how much fertiliser to order for the coming season, by surveying a sample of 30 members selected at random.

What would be the value of responses to questions such as:

- "If the Utopian Farmers' Society started to supply fertiliser next year, would you buy it?"

Members would probably exaggerate their estimates because (i) there is no commitment involved and (ii) if somebody asks such a question he is probably testing out his own ideas, and nobody wants to disappoint him with a 'no' or a negative answer.

- 11) Ask trainees to compare the above question with the following questions, which should be written on the chalkboard or OHP:

Name:.....

Hectares farmed:.....

How much fertiliser did you use last season?.....

What prevented you from using more of it?.....

If used, where did you buy it?.....

If fertiliser was available from the Utopian Farmers' Society at \$X, how much would you buy next season?.....

Elicit the following differences/improvements:

- the member is not aware of the purpose of the inquiry until the last question, so the answers are not likely to be biased by the desire to please;
- the information is linked to some factual and verifiable data (hectares farmed) and to past facts (fertiliser used); this is a guard against absurd information;
- there are no leading questions such as might suggest to the farmer that he should answer in a certain way;
- "indirect" information is included which can be used to verify data (the existing supplier); the existing supplier will also give a lead to the type of service needed if the society can find out the terms on which the existing supply operates.

- 12) Ask trainees to imagine that the questionnaire was distributed to 30 members selected at random. Write the summary of their answers to the questionnaire as follows (on the chalkboard or OHP):

Name:

Hectares farmed: average 5 (the same as the average for the whole society)

How much fertiliser did you use last season?

- 12 members: none
- 18 members: average 25 bags each (recommended usage 10 bags per hectare)

What prevented you from using more of it?

- Non-users: 10 do not believe in it  
2 have never heard of it
- Users: 6 already using recommended quantity (verified)  
6 fertiliser is too expensive  
6 need credit

If used, where did you buy it?

- All users purchased fertiliser from private traders.

If fertiliser was available from the Utopian Farmers' Society at \$X, how much would you buy next season?

- 10 present non-users: average 15 bags each
- 2 present non-users: none
- 9 users none
- 9 users average 25 bags each

Allow trainees up to 15 minutes each to estimate how much fertiliser the society should order, assuming that the secretary must order immediately the full quantity needed for next season.

- 13) Ask trainees for their suggestions. Elicit following conclusions and stress throughout that such data, which are difficult to obtain, are not a substitute for judgement and do not eliminate risk - they help the decision maker, but they do not make the decision process easier.

- It is unlikely that non-users will be converted by the stocking of the Utopian Farmers' Society alone; potential buyers will therefore equal 18.
- Effective marketing may convert 1/3 or 3 of the 9 users who state that they will buy from the Utopian Farmers' Society.
- A proportion of users who say they will buy from the Utopian Farmers' Society will probably not do so; assume 1/3 or 3.

- If the Utopian Farmers' Society offers credit and lower prices, present average usage of 25 bags per farmer may be expected to increase - assume that it rises by 50%.

Therefore, the results from the sample of 30 farmers are as follows:

- 12 non-users;
- 6 will buy elsewhere, or so they say;
- 3 will buy from the Utopian Farmers' Society because of effective marketing;
- 6 will buy from the Utopian Farmers' Society;
- 3 will not buy from the Utopian Farmers' Society in spite of what they say.

Average usage 25 bags + 50% equals 37 bags.

Total usage by sample group equals 333 bags (9 x 37).

Sample group equals 1/10th of the total membership.

Total society usage = 3,330 bags.

- 14) Point out that the information suggested the importance of credit and price, and that decisions on these points will clearly affect the final consumption. Stress again that there is no "correct" answer, but the estimate is a more informed one than would be possible without the information obtained from a survey sample.

How to Find Out What Our Farmers Need

The secretary of the Utopian Farmers' Co-operative Society was pleased that the committee and the Co-operative Department accepted his suggestion that the society should extend its activities. Members have benefited substantially from four years of successful crop marketing, and they now need the society to set up a farm supply service to provide them with the farm inputs they need.

The committee was enthusiastic, and asked the secretary to report back in due course with his plans. He realised that his first problem was to find out what the members needed. Funds for the new venture could be borrowed from the Co-operative Bank, but only if the society could show that the operation would be self supporting, and the secretary knew that the experience of other societies' farm supply services had been mixed; some had been of great value to members and had provided a useful surplus for refund and reserves, while others had drained away the resources of their societies until they had had to close.

The Ministry of Agriculture, whose extension staff cover the area fairly comprehensively, was keen that farmers' societies should take on the supply of farm inputs. Although there were large numbers of private traders in the Utopian Society's area, many farmers believed that their prices were too high and the shops often ran out of vital supplies at the very time when they were most needed.

A number of salesmen from companies which distributed farm inputs had called on the secretary of the Utopian Society, because they thought that the society was a potential customer. Their arguments had impressed the secretary, but he was anxious to be quite sure that the items supplied by the society should be those which farmers most needed; he was prepared to spend some time and effort at this stage, rather than to make hasty decisions which could not be reversed later.

Assignment :

List all the possible sources of information which the secretary might use to find out what his members need. Identify the advantages and disadvantages of each.

SESSION 2.2

IDENTIFYING AND FILLING GAPS

Objective: To enable trainees to identify inadequacies in existing supply systems for a range of farm inputs, to suggest alternative supply systems and to identify ways in which a co-operative farm supply service can, or cannot, improve the existing supply.

Time 1 - 2 hours.

Material: Case study.

Session Guide:

- 1) Distribute the case study to syndicates, which may be the same groups as those used in the previous session. Ask them to complete the assignment and allow up to 30 minutes for this.
- 2) Ask syndicates to state the items they recommend should be stocked; opinions will differ but one set of answers might be as follows:

Steel sheets: Existing service acceptable, not a direct farm input, do not stock.

Cement: As the new Utopian Farmers' Co-operative Society Supply Service will only distribute a very limited range of inputs, it would be better if it stocks only those items to which it has good access itself.

Spades and hoes: If the co-operative stocks and distributes, it will have to add a distributive margin which will increase the price of spades and hoes presently sold direct by the manufacturer. The society should therefore encourage the manufacturer to continue selling direct to farmers, but should also advise him on quality.

Fertiliser: The co-operative to supply, if possible on credit, but prices only to be reduced after ensuring that existing private traders' margins are not necessary to cover transport, distribution, storage and other costs.

Seed maize: As fertiliser.

Insecticide: Do not stock until demand generated by Ministry of Agriculture extension staff.

Herbicide: Stock and repack in small containers by arrangement with Ministry of Agriculture provided that it is safe to repack on a small scale. Providing also that farmers are willing to pay the necessary higher price. Substantiate this by research.

Gunny sacks: Check if traders' margins are sufficient to cover a proper share of distributive cost; if not, do not stock until manufacturers increase the margins.

Fencing wire: Do not stock unless alternative high quality and equal or lower priced supplies can be found.

Nails: As cement.

Cattle spray: As herbicide.

Milking jelly: Discuss with the Ministry of Agriculture the possibility of stock holding to ensure that supplies are available at all times. Increase price if necessary to cover cost of storage.

Layers mash: If chickens are kept by a large number of members, stock, but only if margin allows for lower prices after covering its proper share of distributive costs.

- 3) Ask trainees to attempt to define the proper role of a co-operative farm supply service. Some may refer to the interests of the society as a corporate body, as distinct to those of its members. Stress that the objective of a co-operative farm supply service should be to satisfy farmers' needs for inputs, but supplying them at a price and level of service which is at least as economical and effective as that already available.
- 4) Refer back to the products: cement and gunny sacks. Ask trainees when they would consider it right for a co-operative supply service to stock and distribute:
  - products for which the co-operative cannot guarantee a regular supply (cement, for instance);
  - products with an insufficient distributive margin, i.e. the co-operative will lose money on distributing the product (gunny sacks, for instance).

Suggestions should include: a co-operative supply service should only decide to distribute such products when

- the inputs in short supply are essential for the main economic activities of farmer members;
- there is an artificially created shortage (e.g. private traders are hoarding);
- the short supply leads to exploitation of members by private traders;
- there is no possible substitute for the inputs.

However, the distribution of such inputs can only be undertaken by a co-operative supply service provided that certain conditions are adhered to. Ask trainees which ones.

Answers should cover:

- |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Products in short supply | <ul style="list-style-type: none"> <li>- co-operative to inform members beforehand of likelihood of irregular supply;</li> <li>- co-operative to involve members in design of a fair distributive system which should be accepted by everybody <u>before</u> distribution starts;</li> <li>- co-operative to continue to look for additional supply sources.</li> </ul>                                                                                                   |
| Products at a loss       | <ul style="list-style-type: none"> <li>- co-operative to make sure that losses on "loss-leader" products are covered by surplus on distribution of other products;</li> <li>- co-operative to try to decrease distribution costs so that existing distribution margin is sufficient to cover distribution costs;</li> <li>- co-operative to put pressure on price regulating authority (manufacturer and/or government) to allow for fair distribution margin.</li> </ul> |

5) Ask trainees if they can recall any examples of disloyalty when members bought from alternative sources. Ask them to explain why their members were "disloyal". Their answers should show that they were in fact "loyal" to their own interests. If these interests were opposed to those of the society, then the society was at fault and not the members.

6) Ask trainees why members should prefer to buy supplies from their co-operative society. Responses may include:

- Loyalty: This is important, but members should not be expected to sacrifice their own interests for the sake of loyalty to the society. Loyalty should be to the most effective service.

- Low price )

These qualities explain all farmer

- High quality )

buying decisions. A co-operative

farm supply should compete on level

- Reliable deliveries )

terms, and capture the market on its

own merits.

- Useful information )

Gaps in Utopia

The secretary of the Utopian Farmers' Co-operative Society collected information from various sources about the farm supply needs of his members. The Co-operative Bank manager made it clear that funds for the new farm supply service would only be available for a very limited range of stocks, which represented the major needs of the members. The secretary was therefore anxious only to recommend items which he felt the society could economically and effectively supply, and which would genuinely be needed by the membership.

After studying all his data, the secretary finally summarised it in the following form:

Item	Available in the region or not	Where available	Problems
Steel sheets	Available	Private traders	-
Cement	Not available	-	Insufficient supply from the factory
Spades	Available	Local private manufacturer	Quality variable
Hoes	Available	Local private manufacturer	Quality variable
Fertiliser	Available	Private traders	High prices and no credit
Seed maize	Available	Private traders	High prices and no credit
Insecticide	Not available	-	Insufficient demand
Herbicide	Available	Ministry of Agriculture	Only available in large drums
Gunny sacks	Not available	-	Traders claim insufficient margin permitted by regulations

Item	Available in the region or not	Where available	Problems
Fencing wire	Available	Private traders	High prices and poor quality
Nails	Not available	-	Insufficient supply from factory
Cattle spray	Available	Ministry of Agriculture and private traders	Only available in large drums
Milking jelly	Available	Ministry of Agriculture	Erratic supply
Layers Mash	Available	Private traders	High prices

Assignment :

Prepare a list of items you recommend to be stocked.

SESSION 2.3

WHAT TO STOCK

Objective: To enable trainees to select appropriate items to be stocked in relation to their cost, the gross margin available and the stock turnover to be achieved.

Time: 1 - 2 hours.

Material: Exercise.

Session Guide:

- 1) Remind trainees that this session will enable them to select, from a list of products needed by members, those products which the co-operative supply service could distribute most economically. However, also remind them of the exception to this criterion, as discussed in the previous session (products in short supply/loss-leader products).
- 2) Ask trainees to suggest what information they need about an item before deciding whether or not to stock it.

Elicit the following headings:

- a) A description of the item itself, its use and so on.
  - b) Its cost.
  - c) The multiples in which it can be bought and the minimum quantity.
  - d) The price for which it will be sold.
  - e) The volume and timing of members' likely demand for it.
  - f) The likelihood of future shortages.
- 3) Discuss the sources of these items of information:
    - The manufacturer or distributor should provide information about the product, its price and the quantities in which it can be bought.

- The market, or existing suppliers, will often determine the selling price to members.
  - Ways of identifying members' needs, and the ones a co-operative society should attempt to satisfy, are discussed in the two previous sessions. Actual quantities are often more difficult to determine.
- 4) Ask trainees to suggest ways of finding out members' likely demand for a given product. Trainees are likely to refer back to the survey methods (random sampling) discussed in Session 2.1. Ask trainees whether they could suggest other ways in which to find out members' likely demand for a given product.
- The manufacturer may provide some guidance but may tend to overstate what is required.
  - Ministry of Agriculture officers may be able to say what members ought to require.
  - If possible, and even if it costs more money, small quantities can be stocked and re-ordered as necessary, so that total demand can be assessed for the following season.
- 5) Distribute the exercise and allow trainees up to one hour to complete it.
- 6) Ask trainees to give their answers. Elicit from them information such as is included in the following table:

Item	Cost of Minimum Order	Monthly Turnover	Monthly Surplus	Ratio Surplus to Investment	Final Ranking
Fertiliser	\$ 1.400	\$ 6.000	\$ 400	0.28	4
Seed Maize	\$ 125	\$ 560	\$ 60	0.48	2
Insecticide	\$ 400	\$ 110	\$ 10	0.02	
Herbicide	\$ 150	\$ 350	\$ 50	0.33	3
Gunny Bags	\$ 200	\$ 100	\$ 20	0.10	5
Wire	\$ 100	\$ 250	\$ 50	0.50	1
Nails	\$ 360	\$ 80	\$ 8	0.02	
Cattle Spray	\$ 180	\$ 100	\$ 10	0.05	
Milking Jelly	\$ 100	\$ 25	\$ 5	0.05	
Layers Mash	\$ 900	\$ 500	\$ 50	0.05	

Clearly, the items which produce most trade or surplus, in relation to the minimum investment required are wire, seed maize, herbicide and fertiliser. The total investment in these is \$1,775 and this uses up the amount available to the secretary.

What Should They Buy?

The secretary of the Utopian Farmers' Co-operative Society was given a list of items which he should attempt to stock for resale to members. He surveyed a random sample of members, made some inquiries with suppliers and the Ministry of Agriculture and produced some estimates of the likely monthly demand for each item. He also obtained quotations from a number of manufacturers and distributors, and listed the most competitive quality suppliers, together with their prices, the selling prices to members which were recommended by the Ministry of Co-operatives and the minimum quantities which would have to be bought by the society. He constructed a table containing all this information, as reproduced below:

Item	Monthly Requirement	Cost	Selling Price to Members	Suppliers Minimum Order Quantity
Fertiliser	20 tons	\$280 per ton	\$300 per ton	5 ton loads
Seed Maize	2,000 kg	\$0.25 per kg	\$0.28 per kg	10 x 50 kg bags
Insecticide	50 litres	\$2 per litre	\$2.20 per litre	20 x 10 litre drums
Herbicide	100 litres	\$3 per litre	\$3.50 per litre	10 x 5 litre cans
Gunny Bags	400	\$1 for 5 bags	\$0.25 per bag	1,000 bags
Wire	10 rolls	\$20 per roll	\$25 per roll	5 rolls
Nails	40 kg	\$1,80 per kg	\$2 per kg	200 kg
Cattle Spray	100 lt	\$0.90 per lt	\$1 per litre	50 x 4 litre cans
Milking Jelly	10 kg	\$2 per kg	\$2.50 per kg	50 x 1 kg tins
Layers Mash	1 ton	\$450 per ton	\$500 per ton	2 tons

The secretary could see at a glance that he had a problem. Members were anxious to buy all the products listed, as soon as they came into stock, but the society only had a total of \$1,800 to spend. The secretary wanted to buy what members needed, but he could not buy everything. The society needed to make a reasonable surplus on what it sold to finance new purchases and to pay for future distributions to members. The secretary wondered what he should buy and in what quantities.

Assignment :

Advise the secretary what items he should buy. Your answer should take into account the volume of trade, the amount of surplus and the minimum amount of money that has to be invested in each item for it to be purchased. You may assume that all items are available on immediate delivery.

topic

**3**

# supplier choice

Session 3.1 Which Supplier?

Session 3.2 Is it Wrong?

Session 3.3 Negotiation

SESSION 3.1

WHICH SUPPLIER?

Objective: To enable trainees to select the best supplier for each product to be supplied to their members.

Time: 1 - 2 hours.

Material: Case study.

Session Guide:

- 1) Ask trainees, in syndicates of six members each, to suggest which supplier the secretary should choose in the situation described in the case study. Allow up to one hour for this.
- 2) Bring the syndicates together and ask each to state, without explanation, which supplier should be selected. Construct a table on the chalkboard to show how each syndicate ranked the suppliers.
- 3) Ask trainees to suggest questions they should ask when selecting suppliers. Elicit, or suggest as necessary, a list as follows:
  - Price.
  - Credit terms.
  - Product quality.
  - Reliability.
  - Delivery.
  - After sales service.
  - Availability of information.
  - Packaging.
  - Continuity of supply.
  - Frequency of delivery.

(Do not spend time on discussion as to whether or not a certain item is part of another; the words or number of reasons are of no interest since the purpose of the exercise is to improve trainees' ability to select suppliers.)

- 4) Ask trainees to suggest how each of the suppliers in the case study should be rated according to these standards. Draw up a table along the following lines on the chalkboard:

	Fertiliser			Wire Fencing		
	Supplier A	Supplier B	Supplier C	Supplier D	Supplier E	Supplier F
Price	Neutral	Good	Bad	Neutral	Good	Bad
Quality	Neutral	Neutral	Neutral	Bad	Neutral	Good
Delivery	Neutral	Bad	Good	Bad	Neutral	Good
Payment Terms	Good	Bad	Neutral	Neutral	Bad	Good
Reliability	Good	Neutral	Bad	Bad	Bad	Good
After Sales Service	Good	Bad	Good	Neutral	Neutral	Neutral

- 5) Show from this that the cheapest supplier is usually the one with the lowest level of other service; explain that this is to be expected since delivery, credit, service and so on cost money.

Ask trainees to reconsider their decision on the suppliers to be chosen in the case study; if they have changed their opinions discuss the reasons. The following questions should be used to stimulate discussion:

- At what point does a low price outweigh the disadvantages of poor service, unreliability, lack of information and so on?
- Is it better to have the more expensive product when members need it, or the cheaper one a month late? Which is actually better value for members?

- Can it ever be right to pay a higher price for exactly the same physical product, because of better services offered by a supplier?
- 6) In order to simplify the exercise, and to concentrate on specific differences in terms, prices and so on, no co-operative organisation has been given as an alternative supplier. If time allows, and if this is a real issue for trainees, ask them to reconsider their selection assuming that the least preferred supplier in each case is a co-operative union to which the society owes some loyalty, but which it is not compelled to buy from. How, if at all, would this change affect their decision?

Which Supplier?

The secretary was nervous; now that the committee had decided what should be bought, he had to choose the right supplier. If anything went wrong, he would be blamed, and might even be suspected of corruption and dismissed. He realised that if everything went according to plan, nobody would ever thank him. However, if he could build the Utopian Society into a strong viable organisation, this should be his own reward. The society needed to develop the farm supply business; cash was short, but money was available for fertiliser and wire fencing, and the immediate problem was to select a supplier for each of these. In each case there were three possibilities, and the quantity required by the society was not enough to have more than one supplier. The secretary had also to select a "reserve" or "second best" supplier for each item, in case unexpected problems occurred with the first supplier. He had collected as much information as he could about the three suppliers and he studied them and wondered which to choose.

Fertiliser

There were three possible suppliers. All supplied the same basic product of the type recommended by the Ministry of Agriculture, and made by the same manufacturer. However, there were several other differences:

Supplier A: Is a long established farm supply distributor with depots throughout the country and a large fleet of vehicles. The fertiliser can be delivered to the society's premises for \$250 a ton, and Supplier A is willing to allow the society 60 days credit before paying. Supplier A's local representative is anxious to develop his sales in the society's area, and he can provide simple leaflets and posters. He is also willing to talk to groups of members about how to use the fertiliser, if this can be arranged.

Supplier B: Is a new organisation which aims to provide farm supplies at the minimum cost. Fertiliser can be supplied for \$220 a ton; the customer must collect it from Supplier B's premises approximately 20 kilometres from the Utopian Society, and a banker's cheque must be brought in payment before the fertiliser can be released. This

company offers no information or education services. To avoid the cost of employing salesmen, its offers are sent by mail to potential customers.

Supplier C: Is a recently established firm and its management is very anxious to obtain orders from new customers such as the Utopian Society. The company has a fleet of vans for servicing farm equipment, and these are now being used for delivering farm supplies direct to farmers. Supplier C is prepared to deliver fertiliser direct to members as instructed by the society. The deliveries will be invoiced to the society and 30 days credit is available. The cost of fertiliser so delivered is \$280 per ton. The van drivers are able to give farmers brief advice about how to use the fertiliser when they deliver it.

#### Fencing Wire

Fencing wire is needed by members of the Utopian Society in order to make enclosures for young cattle, chickens or pigs, and to keep neighbours' stock off young plants. There are three possible suppliers:

Supplier D: Is the first steel wire manufacturer in the country. The wire is made from steel which is itself manufactured from old vehicles and other scrap, and the wire is drawn, galvanised and woven into fencing at the factory. Supplier D can offer 20 metre rolls at \$40 per roll, payable within seven days of collection. They must be collected from the factory and because of initial production problems and shortage of scrap material, some delays may be experienced.

Supplier E: Is a large importer of wire fencing. The company had imported large stocks because the owners feared that the government would soon prohibit imports to protect Supplier D. This has not yet happened, and to reduce stocks Supplier E is offering wire at \$35 a 20 metre roll, delivered to the society's store. A banker's cheque must be handed over on delivery, and although some of the stock has been in store for over a year it

is originally of good quality and of similar dimensions to that manufactured by Supplier D.

Supplier E: Operates a wire weaving mill which makes fencing from imported wire. The fencing is sold by local wholesalers nominated by Supplier F. There are two of these near the Utopian Society, and both will deliver fencing at a few hours notice to the society's premises. The price is \$42 per roll, payable within 30 days.

Assignment:

Suggest which supplier the secretary should choose in the situation described in the case study.

SESSION 3.2

IS IT WRONG?

Objective : To enable trainees to recognise occasions when they may be compromised by accepting gifts or other favours from suppliers, and to be aware of the dangers of becoming involved in corruption.

Time 1 - 2 hours.

Material : Exercise.

Session Guide :

- 1) Ask trainees to define the term "corruption". Ensure that all appreciate the difference between corruption and downright theft.
- 2) Distribute the exercise, and ask trainees to carry out the instructions. Allow up to 30 minutes for this.
- 3) When trainees have finished draw a similar diagram on the chalkboard and ask trainees to suggest where each action should be placed. Indicate the place by marking the appropriate number on the line and discuss major differences of opinion. Attempt to produce a group agreement both on the ranking of the individual items and on the location of the point where such actions become morally wrong.
- 4) Ask trainees, individually, to recall for themselves the "worst" thing that they experienced of this sort, and to place it along the line.
- 5) Refer to actual or imagined experiences to show that even the slightest indiscretion can lead to worse problems. Often those who are guilty will try to attract others to join them, in order to protect themselves. Ask trainees to describe examples of networks of corruption where nobody can break out without severe personal risk.

- 6) Discuss ways in which suppliers can be tactfully but firmly informed that the buyer is not interested.
  - Conduct all discussions in the presence of at least one other person.
  - Ensure that all discussions are confirmed in writing.
  - Firmly refuse any offer which appears to approach the dividing line between innocence and dishonesty.
  - Attempt to "translate" any personal offers into price reductions or other concessions which will benefit the society as a whole.
  
- 7) Stress that corruption is a real and continuing management problem which cannot be left out of training just because nobody likes to talk about it. Like bad roads, shortage of vehicles or farmers' illiteracy, corruption is often a pervasive factor which no individual feels he can fight on his own. However, there are more and less honest people in any organisation; if trainees look at the situation realistically and try themselves to be among the more honest, and to encourage their staff likewise, this will achieve more than complaints about the alleged dishonesty of senior staff.

Is it Wrong?

Study the following list of actions, then draw a line on a piece of paper as follows:

Totally \_\_\_\_\_ Totally  
Wrong Innocent

Place each action along this line, by using its number, according to how wrong or how innocent you feel it to be. When you have done this, put a cross on the line to mark the point at which, in your opinion, right is divided from wrong.

- 1) A supplier is anxious to do more business with a society. The secretary's nephew is unemployed and the supplier finds him a job. The society increases its purchases from that supplier.
- 2) A supplier regularly sends a bottle of whisky to the secretary of a society who is responsible for placing large orders with that supplier. The whisky is delivered to the office in an unmarked parcel.
- 3) The brother of the secretary has recently started to make farm tools. The secretary buys nearly all the society's tools from this supplier. The tools are of about the same quality and price as those of the previous supplier.
- 4) A supplier's representative gives the secretary a cigarette when they are discussing business.
- 5) A supplier over-charges for goods delivered to the society; half the excess is paid privately into the secretary's own bank account.
- 6) A representative regularly drives the secretary home from the society's offices after they have had business discussions, since the secretary's home is not far from the representative's normal route.
- 7) A supplier has excess stocks of a particular item. Their lorry drops \$200 worth of this item at the home of the secretary of the society as a "free trial".

- 8) A supplier's representative conceals a high value bank note in his catalogue as he hands it to the society's secretary. The secretary finds it, says nothing and eventually gives the supplier a large order.
- 9) After concluding a large contract, a supplier's representative takes the society's secretary out for a luxurious and expensive meal.
- 10) The brother of the society's president owns a large private transport firm. The president suggests to the secretary that the society hire transport from his brother's business. Some time after the secretary agrees, and as a result gives this firm a great deal of business. The president ensures that the secretary's salary will be increased.

SESSION 3.3

NEGOTIATION

Objective : To enable trainees to negotiate effectively with suppliers of goods and services required for resale to their members.

Time : 1 - 2 hours.

Material : Role play briefs A, B, X and Y.

Session Guide :

- 1) Some time before the session, select two suitable trainees to play the roles of Salesman A and Co-operative Buyer B, and two to play Salesman X and Co-operative Buyer Y. Ask them to prepare themselves to carry out the negotiations in front of the rest of the group. They should use their imagination to fill in any gaps in the role briefs, and should do their best to conclude an agreement in the interests of their own organisations. Neither should of course be allowed to see the other's brief, and both should be told that the 20 minute limit will be strictly enforced.
- 2) Arrange a desk and two chairs to simulate the co-operative office. Distribute Salesman A's brief to half the remainder of the group, and Co-operative Buyer B's brief to the other half. Ask them to observe the negotiations with care, and in particular to be prepared to comment on the performance of the person whose brief they hold, and on his apparent success in achieving the objectives of his organisation.
- 3) When the negotiations are completed, or after 20 minutes have elapsed, whichever comes first, ask the two role players to comment on their experience.
  - What were their objectives at the outset of the negotiation?
  - Did they consider they had achieved their objectives?
  - Were they satisfied with the negotiations?

- 4) Ask trainees to suggest the needs of each "side" in the negotiation. Suggestions may include the following:

Buyer

- A quality product.
- A low price.
- Credit.
- Delivery.
- Information.
- Reliability.

Seller

- Fast payment.
- A high price.
- Advance notice.
- Simple administration.
- Low cost.

Discuss how well these needs appear to have been satisfied during the negotiations. How might either side have satisfied the other without excessive expense to itself?

- 5) Ask the two other trainees to play the role of Salesman X and Co-operative Buyer Y in the same way as the previous role play was conducted. The remaining trainees should be given the role briefs as before.
- 6) Ask the role players, and the rest of the group, to comment on the second role play in the same way as the first.
- Were the negotiations successful for both sides, so that both parties were satisfied?
  - Can the sense of conflict be replaced by a genuine wish to find out the needs and resources of the other side, in order to reach a compromise which comes as near as possible to satisfying both?

Role Brief      Salesman A

You are about to call on Co-operative Buyer B to negotiate. You hope to settle a contract to supply his society with diesel fuel for his new tractor hire operation. The Co-operative has been operating a tractor hire service for some four months, using two tractors to plough, cultivate and harvest members' fields. You own a garage and filling station near the society's office, and you wish to make a contract with the society for supplying all their fuel. There are two other garages in the same area; all three offer fuel of the same quality and at the normal retail price of 50 cents a litre. During the four months which the society has been operating the tractors, they have been purchasing fuel from all three garages more or less at random and you estimate that the total consumption has been about 1,000 litres a month. The society is buying about 400 litres from you at the moment, but since all three garages are equally conveniently located, you wish to make an exclusive supply contract, if at all possible. You pay 45 cents a litre for fuel to your own supplier, and you have worked out the following figures to help you decide what price reduction you can offer if necessary.

Normal Selling Price	50 cents a litre
Buying Price	<u>45</u> cents a litre
Gross Margin per. Litre	<u>5</u> cents

Existing sales to co-operative -- 400 litres.

Gross profit on existing sales to co-operative -  $400 \times 5 \text{ cents} = \$20$ .

Total sales potential to co-operative - 1,000 litres.

Gross profit per litre needed to maintain total gross profit if exclusive supply can be negotiated -  $\$20 \text{ divided by } 1,000 \text{ litres} = 2 \text{ cents}$ .

Minimum selling price to maintain total gross margin - 45 cents plus 2 cents = 47 cents.

Since more labour, wear on the pump and other effort is involved in selling 1,000 litres than in selling 400 litres, you naturally want a higher price than the minimum of 47 cents. On the other hand, you believe that the society will purchase more tractors, and perhaps lorries and other vehicles in due course, and so if you can secure the business now you should be able to enjoy extra turnover as well.

It is possible, of course, that the society will eventually purchase its own pumps, or even start its own garage, which would mean that you would lose all the business. Nevertheless, you wish to negotiate a one year contract for a minimum monthly supply of 1,000 litres and you will, if absolutely necessary, come down to 48 cents a litre. Moreover, you feel that a saving of 1 cent per litre, which would be \$10 a month or \$120 a year, should be enough to interest the society.

Role Brief : Co-operative Buyer B

The owner of a local garage is about to call on you. He made the appointment to discuss "how we can do more business with your society" as he put it. You believe that he is referring to your purchases of tractor diesel fuel. Four months ago the society started a tractor hire service using two tractors. The fuel has up to now been purchased, more or less at random, from the three garages near the society's office. All the garages are equally convenient and sell the same fuel at the standard price of 50 cents a litre. The tractors have been using a total of about 1,000 litres a month, and the business has been spread fairly evenly between the three garages. You suppose that the garage owner is eager to offer you some inducement to concentrate all your sales with his garage. This would be quite convenient for the society, but you naturally expect the garage to offer some extra service or some other reason for concentrating all the business with him. Moreover, fuel shortages may occur in the future and a sole supplier might be expected to give the society preference, if there should ever be a shortage.

Role Brief : Salesman X

Your company manufactures and sells jute gunny sacks, and you are about to call on a co-operative society in the hope of obtaining a firm order for the next 12 months' supply. The society has for some time been buying around 2,000 sacks a month from you, at the normal rate for this quantity which is 25 cents each. However, the orders have come in more or less at random, usually for urgent delivery, and payments have, on occasion, been severely delayed. The society has therefore not always received sacks when its members needed them.

You hope to persuade the society secretary to place a firm order for 24,000 sacks (one year's supply) with scheduled deliveries and with regular payments on a monthly basis. This would help you to plan your production and cash flow. You hope that the society will be happy to make such a contract in return for guaranteed reliable supplies. However, you are prepared to reduce the price to 24 cents a sack, if absolutely necessary. You would **only** be willing to make this reduction in the form of a prompt payment discount (i.e. if the society agrees to settle its bills promptly at the end of each month). Since your margins are very tight, however, you would rather not offer it at all.

Role Brief: Co-operative Buyer Y

Your are about to see a representative from the company which supplies your society with gunny sacks. For some time you have been buying about 2,000 sacks a month from the company, at 25 cents a sack. Your members, however, have not always received their sacks when they needed them, because they were not delivered in time. You have complained to the supplier about this, but they replied that they cannot always deliver at short notice, and that they must press for settlement of bills outstanding from earlier deliveries before bringing more. You do not altogether agree, but you are aware that your store's ordering system, and the Accounts Department, are not as well organised as they should be.

# economic order quantities

Session 4.1 High Stocks or Low ?

Session 4.2 What does it cost to have  
Goods in Stock ?

Session 4.3 How many to order ?

SESSION 4.1

HIGH STOCKS OR LOW?

Objective : To enable trainees to identify the cost and benefits of stock holding.

Time : 1 - 2 hours.

Material : Tape dialogue.

Session Guide :

- 1) Tell trainees that they are to listen to a dialogue between two co-operative secretaries. Ask one half of the group to note down arguments in favour of low stocks as they listen, and the others to write down arguments in favour of high stocks.
- 2) Play the tape dialogue, or if a player is not available, enact the discussion using the written dialogue supplied.
- 3) If trainees wish, play or enact the dialogue a second time.
- 4) Ask trainees to read out their lists, and then write up their suggestions on the chalkboard. The following points should have been noted:

In favour of high stocks :

- Less sales and surplus lost because of items being out of stock.
- Members' needs satisfied.
- Members impressed by high stocks.
- Lower prices available for goods bought in high quantities.
- Future price increases avoided.
- Shortages more easily avoided.
- Lower administrative cost of ordering and receiving goods.
- More economic use of transport.

In favour of low stocks :

- Less storage space used.
  - Less money tied up in stocks.
  - Lower cost of insurance.
  - Stocks remain fresher.
  - Stocks less likely to become obsolete.
  - Finance and space available for unexpected needs.
  - Less time and equipment required for high stacking.
  - Theft more difficult and more identifiable.
- 5) Discuss the relevant merits of each argument. Lead trainees to understand that both lists are important, and that it is not possible to say that stocks should be high or low in general. Each situation must be judged on its merits.
- 6) The answer to the question "high stocks or low?" becomes particularly difficult when we are faced with shortages. Shortages can occur for many reasons, but they have one thing in common - they are mostly unpredictable. As a result, two types of problems occur.

Ask trainees for examples of supplies which:

- were not bought when they were available and which members could therefore not obtain when shortages occurred;
- were bought because the purchasers feared they would be in short supply, but the fears were unjustified and the extra costs were a waste and an embarrassment.

No clear-cut techniques exist to solve this type of problem. Still, some thumb rules can be applied. Try to elicit them from the following example: ask trainees to suggest which of the following items should be bought in large quantities and which in small quantities:

- a special veterinary drug which lasts only a few weeks is needed by a farmer whose cattle have an unusual disease; it is available from a nearby stockist at short notice;

- fertiliser is required in large quantities by all members throughout the year; substantial discounts are available for large orders, prices are rising rapidly and shortages are frequent and expected to become worse.

Clearly, just enough of the drug for one farmer's immediate need should be bought, while the society should buy as much fertiliser as it can afford to pay for, and has space to stock. Excess "buffer" stocks against possible future shortages are therefore justifiable when:

- the product is used in large quantities by all members; even if no shortage occurs, we are sure that the big consumption by all members will quickly do away with the excess stock;
- the product is used all the time; long time lags in the consumption of certain products may result in the deterioration of and the considerable loss on excess stocks;
- substantial discounts for large orders; discount could (partly) make up for the cost of money tied up in the excess stocks and the extra costs of storage, even if shortage does not occur;
- excess stocks at the moment of price increases mean that we will have avoided the higher price. Even if shortage does not occur, the extra costs of having kept an excess stock will have been offset by the gains of avoiding the higher price;
- the product can be kept for a long time without risk of deterioration; even if shortage does not occur the risk of leakage will be small.

7) Point out to trainees, however, that clear-cut situations of this kind are unusual. There is a need for ways of determining how much should be stocked when the answer is not so obvious, and the next sessions will be devoted to discovering how this can be done.

Tape Dialogue

- Narrator: Halim and Lobo are both secretaries of co-operative societies. Both have warehouses with stocks of farm supplies, but they have very different ideas of how much they should order and keep in stock.
- Lobo: How is your farm supply side going Halim?
- Halim: Not badly at all Lobo. Our warehouse is full up to the roof.
- Lobo: Oh, I am sorry, what has gone wrong?
- Halim: Wrong? What do you mean, wrong? Our members never go away dissatisfied, and that's all right by me.
- Lobo: That may be, but what does it cost you to keep so much in stock?
- Halim: Things cost us less when we buy in large quantities.
- Lobo: Yes, but what do you spend on storage?
- Halim: The godown cost money to build, but we make a reasonable surplus on what our members buy, and we never lose a sale because we haven't got something.
- Lobo: We try to keep our members happy, but they're interested in the costs of the society as a whole as well as what they buy. Storage is expensive you know.
- Halim: You know how prices go up. We buy, as much and as soon as we can, to avoid price increases.
- Lobo: We don't want to have money lying idle in heaps of unsold goods - money costs money you know, particularly at today's interest rates.
- Halim: I don't like borrowing money either, but I prefer goods to money any day. You never know what's going to be unavailable, so we buy it when it's there.
- Lobo: And then when you want to use it, I suppose it's been ruined by damp or eaten by rats.

Halim: We have a bit of trouble of that sort, yes, but it's worth it. Our members like to see "their" godown full, it means more to them than accounts and a balance sheet.

Lobo: That may be, but I like to be able to buy extra things at short notice. I can't do that if the godown is stuffed full, or if all our money is tied up already.

Halim: The way we do it, if demand for something goes up unexpectedly, we can still cope because we have some in stock already.

Lobo: And if it doesn't, and a new and more up-to-date version of the product comes along, what do you do then?

Halim: Somebody always buys stuff in the end I reckon, and if a few things have to be thrown out, think how much we save by always buying full lorry loads. I bet our transport costs are less than yours.

Lobo: I think a few extra lorry loads are a cheap price to pay for all the trouble we save in the warehouse itself. There's far less heaving about, no mountains of sacks to be built up and taken down. We get by with less people and less equipment.

Halim: Maybe you're right there, but what about the office, receiving the goods and all that? We place fewer, larger orders, and that saves administration, with less chance for mistakes or inaccurate figures.

Lobo: I'm not sure about accidental mistakes, but your warehouse is a paradise for thieves. Nobody could notice a few cartons taken off your massive heaps.

Halim: We're insured anyway.

Lobo: Maybe you are, but I bet you lose stuff without even knowing it, and since insurance is based on average stock, you must pay more than we do.

SESSION 4.2

WHAT DOES IT COST TO HAVE GOODS IN STOCK?

Objective : To enable trainees to calculate optimum quantities by comparing costs and benefits of stock holding.

Time : 2 - 3 hours.

Session Guide :

- 1) Ask trainees to imagine that they want to buy some lemonade drink (or whatever local commodity is appropriate) to take home. They can buy one bottle for 20 cents or a whole crate (24 bottles) for \$3.00. Ask trainees to write down their decision on a piece of paper. When they have done this, count how many have chosen to buy one bottle and how many have gone for the crate.
  
- 2) Ask trainees to suggest the sort of questions they asked themselves before making the decision. These may include:
  - How much lemonade is left at home?
  - How much money have I got?
  - What else do I need to buy?
  - How much lemonade do we drink at home?
  - How much storage space have I got?
  - When will the price of lemonade go up?
  - When will lemonade next be unavailable?
  - How serious is it if we run out of lemonade?
  - When do I next plan to come to the market?
  
- 3) Ask trainees who chose to buy one bottle, why they prefer to buy lemonade at 20 cents per bottle versus 12.50 cents per bottle. Were they not being unnecessarily extravagant? Show that they were in fact making a rational choice, because certain costs of buying the larger quantity were more important to them than the apparent saving.

These were:

- The risk of loss or deterioration.
- The need to buy other things.
- The shortage of space.
- The fact that they had not got enough money.

Show those trainees who chose the larger quantity that they were equally rational in feeling that these "costs" did not outweigh the saving of 7.50 cents per bottle.

4) Ask trainees what this example has shown them. What information must they have before deciding what quantities to buy for their co-operative societies?

- The rate of consumption.
- The likelihood of price increases.
- The likelihood of shortages.
- The quality and volume of storage space available.
- The availability of transport.
- The costs of ordering and receiving consignments.
- Other items needed.
- Existing stocks available.
- The cost of borrowing money.
- The cost of storage.
- The likelihood and cost of losses.

5) Ask trainees to suggest which of these items of information are and are not available to them when deciding on order quantities.

a) They should and probably will know:

- Other items needed.
- Existing stocks.
- Volume and quantity of storage space.
- Availability of transport.
- The normal rate of consumption.

- b) They should, but may not know:
- The cost of placing orders and receiving goods.
  - The cost of money.
  - The cost of storage.
  - The likelihood and cost of losses.
- c) Nobody normally knows:
- The likelihood of future price increases, shortages, or Unproved replacements, as well as unforeseen variations in consumption.

Tell trainees that the rest of this session will teach them how to calculate the items mentioned under b), i.e. the information they should, but probably do not know when deciding how much to order.

Next session will enable them to use and apply some simple techniques for taking the information items mentioned under c) into consideration when deciding on order quantities.

- 6) Ask trainees how they can calculate the cost of placing an order.

Goods are usually ordered by a clerk and received by a warehouseman. The cost of ordering and receiving will not go down if less orders are placed or received. Savings can however be made and calculated if expensive stationery, messengers or other services have to be used, and if they can be saved by ordering less frequently.

Ask trainees to describe how goods are ordered and received in their societies. Could money be saved by ordering less frequently (not in lesser quantities)? If so, how much?

- 7) Ask trainees to suggest how they could calculate the cost of money tied up in stocks. Suggestions may include:
- The interest paid to the bank for an overdraft.
  - The surplus that could be earned by using the money in some other way.



Cost of storing maize over period of six months:

- 1.5% x 6 x 5,000	=	\$450
- 6 months x 5 m <sup>2</sup> x 10 tons x \$1	=	<u>\$300</u>
Total	=	\$750

Cost of storing insecticide over period of six months:

- 1.5% x 6 x 8,000	=	\$720
- 6 months x 40 drums x 1/2 m <sup>2</sup> x \$1	=	<u>\$120</u>
Total	=	\$840

Point out that storage costs can be calculated as a percentage of value for each commonly stored commodity, and this in order to simplify the calculation. Ask trainees to work out the cost per month of storing maize and insecticide as a percentage of their value.

$$\begin{array}{l} \text{Maize} \quad \frac{\$750/6}{\$5,000} = 2.5\% \text{ per month.} \end{array}$$

$$\begin{array}{l} \text{Insecticide} \quad \frac{\$840/6}{\$8,000} = 1.75\% \text{ per month.} \end{array}$$

- 9) Summarize these conclusions in the form, using when possible actual figures from banks and societies with which trainees are familiar.

- Cost of money (say 14% per year)
- Cost of storage (say 10% per year)
- Total cost (say 24% per year or 2% per month)
- Cost of placing and receiving an order \$2

Ask trainees how these figures can be related to the quantity to order. If 1,000 units a year are used steadily throughout the year, and 1,000 are ordered to arrive as the last unit is used, what will be the average number in stock throughout the year?

- On delivery, stock equals 1,000 units.
- Immediately before new order arrives, stock equals 0 units.
- Average stock equals 500 units ( $\frac{1000 + 0}{2} = 500$ ).

If a reserve stock is kept to allow for unexpected changes in usage or delayed deliveries, this quantity should be added to obtain the average figure.

The percentage figure previously calculated should be applied to this average, to obtain the stock holding cost.

e.g. \$500 worth of stock at 2% per month = \$10 per month or \$120 per year storage cost.

- 10) Ask trainees how they might use this information, together with the annual consumption and the costs of an item, to calculate the right quantity to order at any time. Use the following as a simple example:

Milking Jelly

- Annual Use = 1,200 tins
- Normal Cost = \$1 per tin
- Cost of Ordering = \$2 per order
- Cost of Money and Storage = 2% per month

Ask trainees to calculate the cost involved in ordering the following quantities at a time:

- 2,400 i.e. two years' consumption.
- 1,200 i.e. one year's consumption.
- 600 i.e. six months' consumption.
- 300 i.e. three months' consumption.
- 100 i.e. one month's consumption.
- 50 i.e. two weeks' consumption.

For example:

2,400 units

Ordering Cost - 1 order in two years @ \$2 = \$ 1 per year

Stocking Cost - Average stock, 1,200 units = \$ 288 per year

(1200 x 2% x 12)

Total Cost = \$ 289

$$1,200 \text{ units} - \$ 2 + \$144 = \$146$$

$$600 \text{ units} - \$ 4 + \$ 72 = \$ 76$$

$$300 \text{ units} - \$ 8 + \$ 36 = \$ 44$$

$$100 \text{ units} - \$24 + \$ 12 = \$ 36$$

$$50 \text{ units} - \$48 + \$ 6 = \$ 54$$

The answer is therefore that 100 units should be ordered at a time since below this figure the cost starts to rise again.

- 11) Ask trainees to state whether and how they would change their conclusions if the following price changes were made:

Discount of 10% for orders over 1,000 units.

Discount of 5% for orders over 500 units.

- The saving on an order of 600 units would be 5% or \$30. This would reduce the total cost for that order quantity to \$46 (\$76 - \$30). This is still higher than \$36, so only 100 units should be ordered.
- The saving on an order of 1,200 units would be 10% or \$120. This would reduce the total cost to \$26 (\$146 - \$120). It would be worthwhile ordering 1,200 units as this would now be the lowest total cost.

- 12) Remind trainees once again that problems of inflation, shortages, as well as unforeseen variations in consumption, have not been taken into account in these calculations. They will be covered in the following session.

SESSION 4.3

HOW MANY TO ORDER?

Objective : To enable trainees to decide how many of each item to order.

Time : 2 - 2 1/2 hours.

Material: Exercise.

Session Guide :

- 1) Remind trainees that the apparently mechanical calculations introduced in the previous session omitted vital factors such as:
  - Price increases.
  - Shortages.
  - Unreliable suppliers.
  - Unforeseen variations in consumption.

These are all matters of judgement, but they must not be either neglected or allowed to lead to excessive storage costs.

- 2) Ask trainees to suggest what factors should be considered when assessing the chances of future price increases.
  - The likely amount of the increase :

This must be compared with the extra cost of large stock holding as discussed in the previous session; a 5% increase may be enough to make a larger order justified, but a 2% increase may not.

Example:

Use the "Milking Jelly" example and data from the previous session. Assume a situation where the government has announced a 5% increase on milking jelly as from 1 January next year. Should we order more than 100 units and if so, how much more?

If we order a two-year supply or 2,400 units, we will have saved \$120 ( $\$2,400 \times 5\%$ ) by avoiding the price increase. The total cost of placing an order of 2,400 units in a situation where a 5% price increase is going to take place is therefore:

$\$289$ (original cost) - $\$120 = \$169$		
1,200 units	$\$146 - \$60$	= \$86
600 units	$\$76 - \$30$	= \$46
300 units	$\$44 - \$15$	= \$29 ←
100 units	$\$36 - \$5$	= \$31
50 units	$\$54 - \$2.50$	= \$51.50

An order of 300 units becomes more advantageous in the event of an envisaged 5% price increase.

Do the same for an envisaged 2% price increase on milking jelly. Figures are as follows:

2,400 units	$\$289 - \$48$	= \$241
1,200 units	$\$146 - \$24$	= \$122
600 units	$\$76 - \$12$	= \$64
300 units	$\$44 - \$6$	= \$38
100 units	$\$36 - \$3$	= \$33 ←
50 units	$\$54 - \$1.50$	= \$52.50

An order of 100 units remains the most economical. The price increase of 2% does not justify a larger order quantity.

- The likelihood of the increase taking place :

Price increases are frequent, but not inevitable, between every order. A realistic assessment must be made of the likelihood of an increase. For instance, one could use the official inflation rate. With a 12% rate, the likelihood that the prices of the products will rise by at least 10% is quite big, and therefore a realistic assumption.

3) Ask trainees what they should consider when assessing to what extent possible future shortages should influence order sizes.

- Are shortages likely or merely possible?

- Would members suffer severely if the item were not available, or would they be able to carry on without it?
- Will it be possible for the society to buy the item from another source if it ceases to be available from the usual supplier, possibly at a higher price?
- Will members be able to buy supplies from other outlets, if necessary?

4) Ask trainees to consider how they should take supplier reliability into account.

- If suppliers are 100% reliable and deliveries are immediate, stock levels may fall to zero before placing a new order. Clearly, this is practically never the case and a society's buyer must therefore consider:
  - how long it normally takes from the decision to prepare an order until the goods are delivered;
  - what likelihood there is of further delay.

" Buffer" stocks must be held to allow for both these factors. Consequently, goods are re-ordered not when they run out, or at random, but when the quantity in stock reaches a certain predetermined point. The "buffer" stock will be enough to cover consumption:

- while the order is being prepared, sent out, received and put in stock;
- during the period of the worst likely extra delay.

For most goods this means that new orders should be prepared when two or three months' supply still remains. Suppliers may be asked to deliver at a certain date to avoid premature arrival and shortage of space.

5) Ask trainees how unexpected variations in consumption should be allowed for.

- If members' demands rise unexpectedly, can the product be obtained from other sources even at a higher price?
- Can members' intentions be made more certain by inquiry, or by encouragement to take stocks in early, or by some other means?

6) Ask trainees to complete the problem exercise. The answers are as follows:

Rubber Boots

Present Situation: Consumption is 20 pairs per month with little risk for variation. Supplier reliability is poor and delay between order and delivery may therefore occasionally exceed the normal one month period. Present stock of 100 pairs, equal to 5 months consumption is too high however. A buffer stock representing 2 months consumption would be safe enough.

Suggested Minimum

Stock: 40 pairs

One ordering system for rubber boots therefore consists of ordering 20 pairs every month and keeping a minimum stock of 40 pairs.

			Order 1 20	Order 2 20	Order 3 20	Order 4 20
	Jan	Feb	Mar	Apr	May	Jun
Opening Stock	100	80	60	40	40	40
- Consumption	20	20	20	20	20	20
+ Deliveries	-	-	-	20	20	20
= Closing Stock	80	60	40	40	40	40

Cost of this system per year would be:

- 12 orders x \$5 = \$ 60
- Average stock 40 pairs  
40 x \$25 x 24% = \$240
- Total yearly cost = \$300

Alternatively, one could plan orders of 100 pairs in order to benefit from the quantity discount of \$1 per pair. Would this be cheaper or more expensive for the society? The minimum stock is kept at 40 pairs.

			Order 1 100			
	Jan	Feb	Mar	Apr	May	Jun
Opening Stock	100	80	60	40	120	100
- Consumption	20	20	20	20	20	20
+ Deliveries	-	-	-	100	-	-
= Closing Stock	80	60	40	120	100	80

		Order 2 100				
	Jul	Aug	Sept	Oct	Nov	Dec
Opening Stock	80	60	40	120	100	80
- Consumption	20	20	20	20	20	20
+ Deliveries	-	-	100	-	-	-
= Closing Stock	60	40	120	100	80	60

Cost of this system per year would be:

- 2 orders x \$5 = \$ 10

- Average stock 80 pairs

80 x \$24 x 24% = \$461

\$471

Minus

- Quantity discount 1 year  
consumption

120 pairs x \$1.00 \$120

Total yearly cost \$351 (higher than for the first  
system)

### Insecticide

Present Situation: Present stock of 1,000 litres is too small, since possibility of variation in the normal monthly consumption of 1,000 litres is high. A buffer stock of 500 litres would be safer. More would not be needed since supplier reliability is good and no quantity discounts can be obtained from purchasing larger quantities.

Suggested Minimum

Stock: 500 litres

The ordering system for insecticide will therefore be as follows:

	Order 1 1,500	Order 2 1,000	Order 3 1,000	Order 4 1,000	Order 5 1,000	Order 6 1,000
	Jan	Feb	Mar	Apr	May	Jun
Opening Stock	1,000	0	500	500	500	500
- Consumption	1,000	1,000	1,000	1,000	1,000	1,000
+ Deliveries	-	1,500	1,200	1,000	1,000	1,000
= Closing Stock	0	500	500	500	500	500

Cost of the system per year would be:

$$12 \text{ orders} \times \$5 = \$ 60$$

- Average stock 500 litres

$$500 \times \$1.00 \times 24\% = \underline{\$120}$$

$$\text{Total yearly cost} = \$180$$

### Iron Sheets

Present Situation: Since supplier reliability is poor, and delivery takes 2 months or more, buffer stock of 2 times the normal monthly consumption could be kept. Present stock of 200 sheets is too high, particularly since possibility of consumption variation is low. Quantity discount offered on 500 sheets could however more than offset extra stocking costs resulting from 500 sheet orders.

Suggested Minimum

Stock: 100 sheets.

Alternative 1

Orders of 100 sheets (= minimum order accepted by supplier) thereby foregoing quantity discount.

	Order 1 100		Order 2 100		Order 3 100	
	Jan	Feb	Mar	Apr	May	Jun
Opening Stock	200	150	100	150	100	150
- Consumption	50	50	50	50	50	50
+ Deliveries	-	-	100	-	100	-
= Closing Stock	150	100	150	100	150	100

Cost of this system per year will be:

- 6 orders x \$5 = \$ 30
- Average stock 125 sheets  
125 x \$10 x 24% = \$300
- Total yearly cost \$330

Alternative 2

Orders of 500 sheets, taking advantage of quantity discount.

	Order 1 500					
	Jan	Feb	Mar	Apr	May	Jun
Opening Stock	200	150	100	550	500	450
- Consumption	50	50	50	50	50	50
+ Deliveries	-	-	500	-	-	-
= Closing Stock	150	100	550	500	450	400

					Order 2 500	
	Jul	Aug	Sept	Oct	Nov	Dec
Opening Stock	400	350	300	250	200	150
- Consumption	50	50	50	50	50	50
+ Deliveries	-	-	-	-	-	-
= Closing Stock	350	300	250	200	150	100

Cost of this system per year will be:

- 2 orders x \$5 = \$ 10
- Average stock 290 sheets  
290 x \$9 x 24% = \$626  
\$636

Minus

- Quantity discount on 1 year  
Consumption: 600 sheets x \$1 = \$600
- Total yearly cost \$ 36 (this is cheaper)

#### Cattle Spray

Present Situation: Definitely overstocked, since consumption is stable and supplier reliable. A 100 litre buffer stock would surely be sufficient.

Suggested Minimum

Stock: 100 litres

Orders of 200 litres in order to benefit from the quantity discount of 10 cents/litre.

		Order 1 200		Order 2 200		Order 3 200
	Jan	Feb	Mar	Apr	May	Jun
Opening Stock	500	400	300	200	100	200
- Consumption	100	100	100	100	100	100
+ Deliveries	-	-	-	-	200	-
= Closing Stock	400	300	200	100	200	100

		Order 4 200		Order 5 200		Order 6 200
	Jul	Aug	Sept	Oct	Nov	Dec
Opening Stock	100	200	100	200	100	200
- Consumption	100	100	100	100	100	100
+ Deliveries	200	-	200	-	200	-
= Closing Stock	200	100	200	100	200	100

Cost of this system per year will be:

- 6 orders x \$5	= \$ 30
- Average stock 150 litres 150 x \$1.90 x 24%	= <u>\$ 68</u>
Total	= \$ 98

Minus

- Quantity discount on yearly consumption of 1,200 litres 1,200 x \$0.10	= <u>\$120</u>
Profit	= \$ 22

In other words the quantity discount will more than offset the costs of stock-keeping. This alternative should therefore be chosen.

Exercise

A co-operative society manager is faced on 31 December with the following facts about four items stocked by his farm supply section.

	Rubber Boots	Insecticide	Iron Sheets	Cattle Spray
Number in Stock	100 pairs	1,000 litres	200 sheets	500 litres
Monthly Consumption	20 pairs	1,000 litres	50 sheets	100 litres
Minimum Order Accepted by Supplier	10 pairs	500 litres	100 sheets	100 litres
Possibility of Variation in Consumption	Low	High	Low	Low
Normal Delay between Placing Order and Receipt of Goods	1 month	1 month	2 months	3 months
Supplier Reliability	Poor	Good	Poor	Good
Price	\$25 a pair	\$1 a litre	\$10 a sheet	\$2 a litre
Quantity Discounts Available	\$1 reduction for orders of 100 pairs	Nil	\$1 per sheet reduction for orders over 500 sheets	10 cents a litre reduction for orders over 200 litres

Cost of preparing each order = \$5

Cost of stocking goods = \$2 per \$100 worth of goods per month (i.e. 24% per year).

The manager wants to introduce an ordering system and plan for each of the 4 items which will guarantee:

- (i) a minimum risk for out-of-stocks;
- (ii) minimal costs to the society.

For each item advise the manager on:

- The minimum stock level?
- What quantities should be ordered?
- When to order?

# ordering and receiving goods

Session 5.1 Receiving Goods - The  
Information Needs

Session 5.2 Checking Goods Received

Session 5.3 The use of Order and  
Delivery Systems

SESSION 5.1

RECEIVING GOODS - THE INFORMATION NEEDS

Objective: To enable trainees (1) to identify the specific data that are needed by a supply manager to control the ordering and receipt of goods and (ii) to design a single system which will provide all these data.

Time: 1 - 2 hours.

Material: Case study and examples of ordering and storage documentation.

Session Guide:

- 1) Ask trainee's to suggest what information is needed in order to control the buying and receiving of products by a co-operative farm supply service. Encourage as many suggestions as possible. These may include:
  - Description of the product.
  - The supplier.
  - Alternative suppliers.
  - Price.
  - The quantity and quality presently in stock.
  - The quantity and quality already on order.
  - The quantity and quality to be ordered.
  - The date of the order.
  - The quantity and quality delivered.
  - The location of the goods in the store.
  - The monthly consumption.
  - The terms of delivery.
  - The amount of money owing to the supplier.
  
- 2) Ask trainees what should be the objectives of an efficient co-operative farm supply ordering and receiving system.

- To buy goods at the best price.
- To buy the optimum quantities.
- To ensure that the correct quantities and qualities are delivered.
- To ensure that goods are stocked in the right place.
- To ensure that suppliers are paid what they are owed.

Ask trainees to "test" each of the information items mentioned under 1) to ensure that they actually contribute towards one of these objectives. Unnecessary data are expensive to collect and retain, and may prevent the collection and use of data which are needed.

- 3) Trainees should have been warned in advance to bring examples of their own documentation. Ask selected trainees to introduce their forms to the group, and to describe how these forms do or do not achieve the previously stated objectives. Documentation will probably include:

- Original order.
- Bin cards.
- Suppliers' delivery notes.
- Suppliers' invoices.
- Goods inspection notes.
- Suppliers' statements.
- Society payment advice.

- 4) Ask trainees to suggest common "gaps" in the information needs of a co-operative farm supply ordering and receiving system. These may include:

- Location of goods is not indicated.
- The quality or quantity discrepancies are not discovered before the invoices are settled.
- No record of alternative suppliers' prices or performance is available.

- Goods can be ordered even though they are already on order, possibly from alternative suppliers.

- 5) Distribute the case study. Divide trainees into small groups and ask them to design a simple but effective system which will provide all the necessary information for the Utopian Farm Supply Co-operative to achieve the objectives previously identified for an efficient farm supply service.

Depending on the time available, groups should provide a list of the documentation and procedures and actual designs for the various documents. Each group should present its solution for discussion and comment. This could be done in the form of a "system game" whereby trainees enact for the rest of the trainees, the procedure and system they have designed, complete with documents, staff, etc. Trainees should evaluate the proposed systems through reference to the following questions:

- Does the system provide all the information required?
- Can the system easily be used by the staff available?
- Are any documents or procedures unnecessary?
- Are there any procedures which will cause unnecessary delays?

A possible system might be as follows:

Bin cards kept on all items in the warehouse, carrying the following information:

- Item code number (which itself identifies the location).
- A brief two to three word description.
- The normal order quantity and stock level at which a new order should be prepared.
- The date and quantity of goods received.
- The date and quantity of goods issued.
- The balance.

The procedure should work as follows:

- 1) The warehouse clerk should inspect all cards daily and note items to be ordered.

- 2) The clerk should refer to the file kept for each item.  
Such a file should contain:
  - a card recording all orders placed, with the quantity, the supplier's name and the price;
  - a copy of any order placed but not yet delivered, so that outstanding quantities can be kept up to date by the clerk;
  - quotations and other information from alternative suppliers.
- 3) After checking on supplier details and orders already outstanding, the clerk should prepare a three copy order containing the following information:
  - Order number.
  - Date.
  - Delivery date required.
  - Description of goods (including item code number).
  - Price.
  - Place to be delivered.
  - Quantity.
  - Any other terms which must be repeated.
- 4) After checking and signing by the manager, or other responsible officer, copies should be despatched as follows:
  - one copy sent to the supplier;
  - one copy kept in the item file;
  - one copy sent to the accounts clerk.
- 5) Warehouse clerk to continue to monitor his cards daily, and is thus reminded to "chase" orders placed but not delivered.
- 6) When goods are delivered:
  - Warehouse staff (a) unpack, (b) count, (c) inspect and (d) store the goods in the locations as identified by the item code number mentioned on the order.
  - Warehouse staff give clerk a note of (a) what has arrived, (b) in what quantities, (c) any quality problems. This may be done on a special form, or noted on the supplier's delivery note.

- Warehouse staff enter the quantity delivered on the bin card.
- The clerk checks the delivery note against the copy of the order kept in the item file, and notes any discrepancies. He then passes it to the accounts clerk, along with the invoice if this arrives with the goods.
- The accounts clerk reconciles the invoice with the original order copy and annotated delivery note. He then settles the account accordingly.

Ensure that trainees appreciate:

- The need for simplicity.
- The need to adapt a system to the ability, literacy, etc., of the people who will be working with it.

Ordering and Receiving System

The secretary of the newly established Utopian Farm Supply Co-operative has to design an ordering and stock receiving system for his society. The operation is initially very small. About 50 different items are to be stocked and there will be one clerk and two storemen to run the complete farm supply system. The society has rented a new single storey warehouse, with sufficient space and racking for goods likely to be stocked. There is a small office in the warehouse for the clerk. One of the storemen is illiterate but the other has been to primary school, and the clerk has had a simple one-year post "O" level course in book-keeping. Some of the items, such as seeds and fertiliser, will be highly seasonal, while members can be expected to buy others such as farm tools at a fairly irregular rate throughout the year. In most cases there is a choice of suppliers for each item, and many items are also available in a variety of different pack sizes. The secretary has heard that many societies with such supply services have problems with the ordering and control of the goods. He wants to make sure that his system is right from the beginning.

Assignment :

Design a simple but effective ordering and receiving system for the Utopian Farm Supply Co-operative. The system (in operation) should be able to cope with the following problems:

- A truckload of goods arrives.
  - What will happen to the goods?
  - Who is doing what?
  - What documents will be needed (what will they look like, who is issuing them, who is receiving copies)?
- How do we know:
  - When, how much and from whom goods should be ordered?
  - Who is to be involved in the ordering procedure?
  - What documents will be necessary?
- How do we make sure that the right payment for goods ordered and received is made?

SESSION 5.2

CHECKING GOODS RECEIVED

Objective: To enable trainees to design and implement economic systems to ensure that goods delivered to their societies are of the quality and quantity desired.

Time: 1 - 2 hours.

Material: Five sets of 200 apparently identical items, such as coins, screws, sheets of paper or anything similar prepared in such a way that:

- two sets are perfect;
- two sets include ten items each which are marked in some way, or are otherwise detectable, but in such a way that this can only be determined by close inspection - it ought to take one person at least five minutes to check the complete set;
- one set includes twenty items each so marked.

Session Guide:

- 1) Ask trainees to recall examples of faulty goods which were not identified on receipt, and could not therefore easily be returned to the supplier. Why were they not discovered sooner?
  - The staff were too busy.
  - The fault was too small to be seen without close inspection.
  - The faults were actually concealed by packaging which could not be opened without making the goods unsaleable.
  
- 2) Ask trainees why suppliers are reluctant to accept returned goods, unless they are informed about this as soon as the goods are received.
  - The goods may have been damaged by the customer.
  - The customer may be trying to dispose of over-stocked goods.

- The goods may have been in stock for longer than recommended or may have been improperly stored.

3) Ask trainees to describe how their societies attempt to avoid the problem of faulty goods or short deliveries. Are they wholly successful? Trainees may mention:

- Checking every single item with care.
- Hoping that members will notice and complain when they, in turn, receive faulty goods from the society.
- Checking a few items from every delivery made.

Ask trainees to suggest the advantages of each method.

100% Inspection:

Every faulty item should be discovered.

No Inspection:

Less work, goods can quickly be put into stock and be ready for members.

Partial Inspection:

Less work than 100% inspection (but faulty items may be missed).

4) Ask trainees how they could limit the time taken, by inspecting only those deliveries where a higher proportion of faults might be expected. How would they identify such deliveries in advance?

- Certain suppliers or products may often include a high proportion of faulty items.
- It may be possible to inspect a small proportion, or sample, in order to decide whether or not to inspect the whole delivery.

5) Show trainees one of the sets of screws or whatever item has been prepared, and explain the nature of the "fault". Explain that the items are to represent a delivery of goods to a co-operative farm supply store.

Trainees are to be divided into syndicates and will have to decide whether or not these deliveries should be accepted into stock or not. Only one nominee from each syndicate will be permitted to do the actual inspection. However, he should follow whatever pro-

cedure is recommended by the rest of the syndicate. Warn syndicates that inspection time costs money, and so do undetected faulty deliveries. The objective is to minimize total costs.

- 6) Syndicates may work in the same room. Tell them that in the first instance they should assume that inspection time costs \$1 per unit, and that an undetected fault will cost their society \$2 each. The penalty for rejecting deliveries which have less than 10% faults is \$50. Allow syndicates up to 10 minutes to decide on the method which they will use to inspect their consignment. Then distribute the items in closed boxes which should be placed in front of the nominee who should start to inspect at the word "go". Ask syndicates to record the number they inspect and their conclusion. Check that they do this correctly and convert their results into costs.
- 7) Repeat this exercise, using the following figures: inspection costs 10 cents per unit, cost of undetected faults \$5 each, penalty for rejecting deliveries with less than 10% faults, \$10.
- 8) Reconvene the group and discuss their conclusions. Syndicates should have chosen different approaches for the second "delivery" because the inspection was cheaper and the penalty for missing faults was higher. Reasonable methods might be:

First Delivery:

Inspect 10 items, cost \$10.

Second Delivery:

Inspect 50 items, cost \$5.

Point out that a sample of around 30 items, selected at random, is usually enough to give a reasonable idea of the quality of the whole amount. If an unacceptable proportion of faults is found in such a sample, it is reasonable to reject the whole delivery or to inspect the whole delivery on some detail.

- 9) Ask trainees to consider items purchased by their societies which are similar to the first "delivery", and those which are similar to the second "delivery", in terms of cost of inspection and penalty for accepting faulty goods.

Inspection Cheap:

Tools, cement, fertiliser.

Inspection Expensive:

Packaged and tinned items, seeds, chemicals.

Undetected Faults Serious:

Veterinary preparations, seeds, some chemicals.

Undetected Faults Not Serious:

Screws, nails, simple tools.

Unfortunately, it is often true that those items which are difficult to inspect are also those where faults can be expensive for members. Ask trainees to suggest how this can be overcome.

- Manufacturers' guarantee of fertility percentage, strength and quality, etc.
  - Special arrangements whereby faults discovered by members some time after delivery from the supplier can still be remedied (return of faulty items).
  - Price allowances to cover the cost of small sample inspection and of repackaging if necessary.
- 10) Ask trainees to apply the lessons of this simple exercise to the goods stocked by their co-operative. Elicit (a) which goods should be accepted without inspection, (b) which should be subjected to 100% inspection and (c) which should be sampled in order to decide whether or not to inspect further.

SESSION 5.3

THE USE OF ORDER AND DELIVERY SYSTEMS

Objective: To enable trainees to (a) recognise order and delivery problems in their society which arise from staff neglect or dishonesty, and (b) to design a control system that will prevent, or at least reveal, such problems.

Time: 1 - 2 hours.

Material: Tape dialogue.

Session Guide:

The session is intended to show that procedures and systems which may appear tedious and unnecessary are in fact needed to prevent loss and fraud. Trainees should refer to the system they designed during Session 5.1, and should discuss what modifications should be made if the system cannot cope with the problems revealed in the tape dialogue.

- 1) Tell trainees that they are about to hear a description of a number of farm supply problems, which lead collectively to the collapse of a farm supply co-operative.
- 2) Play the tape, or if no player is available, ask two trainees to play the roles of the co-operative secretary and his friend.
- 3) Stop the tape or "play" at each "Bleep", and ask trainees how such problems can be avoided. Discuss any necessary changes required to trainees' own systems in order to make them more effective.
- 4) Continue the dialogue, stopping at each bleep and discussing as above. Be sure that any changes are integrated with one another so that the system remains economic and is not burdened with separate and unrelated sub-procedures to deal with particular problems.

Ask trainees to recall examples of procedures which were started because of a particular incident, but which may now be unnecessary or duplicated by other systems.

Examples might include:

- physical stocks to be taken of certain items before reordering, although an accurate written stock ledger is maintained;
- invoices from certain supplies to be checked by a semiofficial, although the system means that all invoices are automatically checked against original orders.

The mistakes mentioned in the tape are exaggerated, but all have taken place many times in co-operatives and other organisations.

Suggestions for preventing them in future should include:

Bleep 1: Copy orders must be kept. No goods paid for until the invoices have been checked against the order, and the quantity marked off to prevent double payment.

Bleep 2: Corruption cannot be entirely prevented. However, routine inspection procedures must be set and adhered to, so that staff cannot claim that particular goods "happened" not to be inspected.

Bleep 3: As number 1, all payments must be made against invoices which are checked against the order.

Bleep 4: Advice notes and invoices should be checked against copy orders. If goods were not ordered, they should be refused or returned at once.

Bleep 5: Prices must be specified on the order, and invoices checked accordingly. Prices fluctuate, so that goods must be ordered at price ruling on date of despatch. Suppliers must verify the price levels by reference to official lists or other independent sources.

Bleep 6: If a file is maintained on each item, including details of all possible suppliers, requests for quotations can be sent out regularly to ensure that the lowest prices are being paid.

Bleep 7: If stocks are regularly monitored and items in short supply are identified, old orders will be identified for following up or cancellation.

Bleep 8: Old orders must be cancelled before new orders for the same goods are placed with other suppliers. The cancellation must be acknowledged, and not merely sent.

Bleep 9: Clear details of container charges and responsibilities must be agreed before orders are placed. These details must be included in the written order.

Bleep 10: Close specifications of goods must be written on the order, both for the supplier and for reference in the file.

(Handout "Do's and Dont's when ordering/receiving/paying farm supplies" summarises the above problems and suggestions and can be distributed to the trainees.)

- 5) Trainees should be prompted to refer to their own experience, and the system in use in their own societies, during the discussion of the dialogue. Ask trainees to mention any other ordering and receiving problems which are not covered, and to suggest how these may be solved.

Tape Dialogue

Mango meets his friend Pawpaw, and finds him very depressed. When they last met, Pawpaw was very excited about his new job managing the farm supply side of the local agricultural co-operative. Now Pawpaw does not look excited about anything. Mango greets him sympathetically.

Mango: Hello Pawpaw, what's wrong with you? It looks like the end of the world.

Pawpaw: I'm not sure about the world, but I'm out of a job, and maybe that's not all that different nowadays.

Mango: What, out of a job? Who's dealing with the farm supply service now? It sounded a wonderful opportunity.

Pawpaw: Closed down, stopped, finished! The money ran out and that's all there was to it.

Mango: But why, didn't the members pay?

Pawpaw: Oh yes, they paid, but the society paid far more to its suppliers, and in the end we just had to stop throwing money away.

Mango: Surely you built up a surplus, didn't you? You were not giving things away, after all.

Pawpaw: Oh yes, the prices and costs looked all right on paper, but the staff and the suppliers all seemed to be crooked, or fools, or both. You know what I found out, almost as soon as I arrived?

Mango: No, what was that?

Pawpaw: At least one supplier was charging us for goods we had never received, and others were invoicing us twice over for the same goods, and being paid.

BLEEP 1

Mango: That certainly is no way to run a business, but surely you put a stop to it.

Pawpaw: As soon as I stopped one thing, another cropped up. Suppliers were bribing our warehouse people to accept sub-standard goods, and lower quantities than we ordered. The staff always said that they had no time to check everything.

BLEEP 2

Mango: Surely your godown must have looked rather empty?

Pawpaw: Not really, because we had enormous heaps of things we did not want.

Mango: How was that?

Pawpaw: One supplier delivered a whole consignment which we never ordered, but we paid when he invoiced us. How were we to know?.....

BLEEP 3

Pawpaw: ..... and another used to regularly deliver orders twice, again and again. He said it was his own despatch department which was at fault, but we used to pay for the goods, because they tied up with the order which we had placed.

BLEEP 4

Mango: It all sounds a bit of a mess. Was that all?

Pawpaw: Oh no, I wish it was. Suppliers used to invoice us at far higher prices than they should have, but of course we had to pay, we needed the goods.....

BLEEP 5

Pawpaw: .....and one or two suppliers, with the "right connections", if you know what I mean, always used to get the business. Nobody seemed to realise that there were other, cheaper, sources of the same products.

BLEEP 6

Mango: What did your members think of it all?

Pawpaw: Well they did not realise exactly what was going on, but they certainly complained when we ran out of stocks. If things were at all short, our suppliers just ignored our orders or denied that they'd ever had them, and never delivered at all.

BLEEP 7

Mango: So you had not got enough of some things?

Pawpaw: And it was a feast or a famine. Sometimes we had nothing and so we ordered more, only to find two lots arriving the next week, one from the new order and one from the old supplier who we thought had forgotten all about our order.

BLEEP 8

Mango: What happens now anyway?

Pawpaw: Well they've got a big job sorting out who owes what to whom. Lots of suppliers claim that we should return containers to them, or should pay for them and nobody seems to know anything.

BLEEP 9

Mango: Have they stopped supplying the members then?

Pawpaw: More or less, and there's lots of things in the godown which nobody will ever want. They just arrived and were invoiced and we paid. That's how our system worked.

BLEEP 10

Mango:           Welt it sounds awful. What are you going to do now?

Pawpaw:          I'm going to work for one of our suppliers - they know how  
money is to be made.

Do's and Dont's when ordering/receiving/paying farm supplies

Problems	Remedies
1) Overpaying suppliers. - Supplier charging for goods never received. - Supplier charging twice for same goods.	Keep copy of orders - pay invoice only when checked against order - quantity on order ticked off.
2) Subordinate staff.  Accepting lower quality/ quantity than ordered (corruption).	Compulsory routine inspection procedures e.g. - Representative sample must be checked on quality for every delivery. - Two people (e.g. gateman/ store manager) must sign for acceptance of goods.
3) Paying for goods received but never ordered.	Invoices to be paid against orders only.
4) Receiving/paying the same consignment several times although ordered only once.	Delivery notes/invoices to be checked against copy of orders; orders to be ticked off; if no unticked order form, goods not to be accepted or to be returned.
5) Supplier invoices at higher prices than agreed.	Mention agreed price on order, check prices on invoices against prices on orders; if different there must be a valid reason given by supplier (e.g. official price increase).
6) Same suppliers continue to receive orders, despite new alternative cheaper suppliers.	Keep supplier file for each item and tender for quotation regularly (e.g. trimestrial).

Problems	Remedies
<p>7) Goods out of stock because not re-ordered in time.</p> <p>Suppliers deny orders at their own convenience for instance in times of shortage.</p>	<p>Establish minimum stock levels at which to order.</p> <p>Closely follow stock level/ orders of goods which have reached critical stock levels. If goods not delivered as expected supplier to be approached. When necessary, old order cancelled/new order placed.</p>
<p>8) Double orders - double deliveries.</p>	<p>Old orders must be cancelled and acknowledged by suppliers before new orders are placed.</p>
<p>9) Who owns empties/crates/containers etc.?</p>	<p>Written order must specify ownership/conditions relating to empties/crates/containers etc. as agreed between supplier/buyer.</p>
<p>10) Delivery of wrong goods because unclear/vague description or specification on the order.</p>	<p>Clear specifications of goods must be written on each order.</p>

topic

6

# warehouse design and storage

Session 6.1 Storage Needs

Session 6.2 Store Layout Exercise

Session 6.3 Store Layout

SESSION 6.1

STORAGE NEEDS

Objective: To enable trainees to identify what storage requirements are needed as a result of the society's trading activities.

Time: 1 - 2 hours.

Material: Case study.

Session Guide:

- 1) Ask trainees to explain the original mistakes that led to the following problems (replace these problems with examples known to the trainees, if possible):
  - A co-operative society was unable to take delivery of fertiliser when it was available because there was no storage space. When space was free, the fertiliser was no longer on the market.
  - A co-operative society was forced to sell members' crops at a lower price when the rain started, because no covered storage was available.
  - A co-operative society purchased a large consignment of seed maize, but it was stored outside and started to sprout prematurely because of damp. Most of the seed was wasted.

Clearly the management of the societies had not provided sufficient storage space. Either they had not planned for it, or funds had not been available.

- 2) Ask trainees to suggest approximate cost figures for building warehouses. Obtain local cost figures if possible, and relate these, and rental costs, to typical society turnover and surplus. Clearly, storage space is necessary but it is also expensive; management must provide what is needed, no less and no more.
- 3) Ask trainees how much storage space their societies have. How did they come to have this particular space? It should be clear that

societies are rarely in a position to plan their storage as they would wish, since the cost of building or renting space often means that facilities are inadequate. Nevertheless, societies should calculate what they need and then use what they have in the most economical way. They must plan to build, buy or rent as it becomes possible.

- 4) Distribute the case study and ask trainees, in syndicates, to complete the assignment. Allow up to 45 minutes for this.
  
- 5) Reconvene the group and ask trainees to state the total space required. Discuss their conclusions and, if necessary, run through the figures on the following basis:

Item	Amount	Space Required	Month												
			J	F	M	A	M	J	J	A	S	O	N	D	
Maize	1,000 Bags	200 sq. metres	x	x	x					x	x	x	x	x	x
Fertiliser	400 Bags	40 sq. metres					x	x	x						
Seed Maize	200 Bags	20 sq. metres		x	x	x									
Insecticide	50 Drums	10 sq. metres						x	x						
Weed Killer	100 Drums	10 sq. metres			x	x	x	x							
Rolls of Wire	100 Rolls	10 sq. metres	x	x	x	x	x	x	x	x	x	x	x	x	x
Corrugated Iron Sheets	1,000 Sheets	40 sq. metres	x	x	x	x	x	x	x	x	x	x	x	x	x
Tools	200 Items	10 sq. metres	x	x	x	x	x	x	x	x	x	x	x	x	x
Sundry Items		5 sq. metres	x	x	x	x	x	x	x	x	x	x	x	x	x
Gunny Sacks	20 Bundles	5 sq. metres				x	x	x							
Tractor Parking		25 sq. metres	x	x	x	x	x	x	x	x	x	x	x	x	x
Implement Parking		5 sq. metres	x	x	x	x	x	x	x	x	x	x	x	x	x
Apples	250 Boxes	25 sq. metres (Refrigerated)	x	x	x	x	x	x							

January requirement = 295 square metres + 25 refrigerated  
 February requirement = 315 square metres + 25 refrigerated  
 March requirement = 325 square metres + 25 refrigerated  
 April requirement = 170 square metres + 25 refrigerated  
 May requirement = 160 square metres + 25 refrigerated  
 June requirement = 160 square metres + 25 refrigerated  
 July requirement = 295 square metres  
 August requirement = 295 square metres  
 September requirement = 295 square metres  
 October requirement = 295 square metres  
 November requirement = 295 square metres  
 December requirement = 295 square metres

Maximum space required = 325 square metres + 25 refrigerated

Approximate cost:

$325 \times \$ 50 = \$16,250 + \$8,125$  (50% for access) = \$ 24,375  
 $25 \times \$200 = \$ 5,000 + \$2,500$  (50% for access) = \$ 7,500  
Total \$ 31,875

6) Discuss the economics of the apple storage proposal. Suggest that the society pay 10% interest on the money invested in warehouse space and elicit the following figures:

- Extra cost of refrigerated space	\$ 5,000
- Cost of associated access area 12.5 square metres at \$200 per square metre	<u>\$ 2,500</u>
- Total	\$ 7,500
- Annual interest cost (10%)	\$ 750
- Increase value apples	\$ 500

This is probably not worthwhile. Before constructing the refrigerated space, inquiries must be made to confirm the merchants' prices, and see if higher prices can be obtained elsewhere either for freshly picked apples (thus avoiding the need for construction) or for stored apples (at a premium of well over 10 cents per kilogram).

7) Discuss cost and benefits of providing warehouse space for seasonal requirements.

Assume the society has decided to build 295 square metres of storage space. The question which comes up however is: should the society not build 325 square metres as the requirements in February and March will be 315 and 325 square metres respectively?

Ask trainees to suggest the savings, and the costs to be considered when taking a decision like this.

Savings (in the event of building 295 square metres storage space rather than 325 square metres storage space)

30 square metres + 15 square metres (50% access)=

45 square metres at \$50 per square metre \$ 2,250

Annual interest saving

\$ 225
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Costs

Cost of 100 bags, i.e. 10,000 kg which cannot be stored for the last 2 months (February/March) and will have to be sold for 2 cents per kilo lower price: 20,000 cents or \$200.

PLUS

Cost of 50 bags, i.e. 5,000 kg which cannot be stored for the last 1 month and will have to be sold for 1 cent per kilo lower price: 5,000 cents or \$50.

Total cost will therefore be \$ 250.

Therefore, it is worth building the extra space, even if it is only occupied for two months.

How Much Space Do They Need?

The Utopian Farmers' Society had finally achieved their ambition. Ever since their foundation they had operated from an assortment of unsuitable and generally uneconomic rented buildings. Now, however, the committee had been told that the Co-operative Bank was willing, in principle, to advance a long-term loan for the construction of a proper office and store. The bank officials asked for a firm proposal describing exactly what was required.

The secretary was asked to draw up the details, and in particular to calculate the storage requirement of the society, based on present operations and future expectations.

Storage had always been a problem for the society, and many of its activities had been curtailed because of the shortage of space. The secretary decided therefore to ignore the present facilities. He worked from the actual quantities of goods that had to be stored to calculate the area that would be needed. He collected a lot of information about the major crops and farm supplies that had to be stored, together with the quantities and approximate timing.

Members have always sold their surplus maize to the society at harvest time, usually in July. Past experience suggested that the selling price rose by about 1 cent a kilo for every month it was kept in store (up to ten months). In previous years the society had been forced to sell farmers' maize soon after harvest because no storage space was available, but it was hoped that the new facility would mean that higher prices could be obtained.

Members were also starting to harvest apples from their new orchard. They had been forced to sell direct to local merchants because the society was not equipped to handle apples. The selling price was around 10 cents a kilogram. Other societies had found that prices could be doubled if apples could be kept six months in refrigerated storage.

The information about the various commodities and farm inputs was as follows:

Item	Quantity	Packaging	Period of Storage	Space Required
Maize	100,000 kg	100 kg bags	July for up to 9 months	1 sq m per pile of 5 bags
Fertiliser	20,000 kg	50 kg bags	April to June	1 sq m per pile of 10 bags
Seed Maize	10,000 kg	50 kg bags	February to April	1 sq m per pile of 10 bags
Insecticide	5,000 l	100 litre drums	May to June	5 drums per sq m
Weed Killer	4,000 l	40 litre drums	March to June	10 drums per sq m
Wire Rolls	5,000 m	50 metre rolls	year round	10 rolls per sq m
Corrugated Sheets	1,000 sheets	single	year round	50 sheets per 2 sq m
Farm Tools	200 items	single	year round	20 tools per sq m
Gunny Sacks	1,000 sacks	bundles of 50	April to June	4 bundles per sq m
Sundry Articles			year round	total 5 sq m
Apples (new proposal)	5,000 kg	boxes of 20 kg	January to June	2 boxes per sq m, 5 high; refrigerated space required
Tractor Parking			year round	5 m x 5 m
Implement Parking			year round	5 m x 1 m

The secretary knew that ordinary warehouse space cost about \$50 a square metre to build. Refrigerated space cost about \$200 a square metre, as well as involving substantial operating costs. It was generally agreed that 50% extra space should be allowed for gangways, access and so on. The secretary now had to decide what storage space the society would need.

Assignment:

You are the secretary of the Utopian Farmers' Society and you have to decide how much storage space the society will need and why.

SESSION 6.2

STORE LAYOUT EXERCISE

Objective: To enable trainees to make the best use of available storage space.

Time: 1 - 2 hours.

Material: Case study, cardboard of various colours, scissors and squared paper.

Session Guide:

- 1) Ask trainees if they have ever been involved in, or responsible for, moving into a new warehouse. Ask any who have had this experience to describe the way in which the location of the various items was decided, and how successfully the available space was used. Explain to trainees that they are to continue the exercise which they started in the previous session. After calculating the total space required, they now have to plan the most effective layout for the warehouse.
- 2) Using the same syndicates as in the previous session, distribute a copy of the case study to each trainee. Give three or four squared sheets, coloured cardboard sheets and scissors to each syndicate.
- 3) Allow syndicates up to one hour to complete the exercise. Explain that this method of layout planning should be used, not only when a new warehouse is to be occupied, but also whenever the management feels that the existing space could be more effectively used. Shortage of space is often the result of inefficient use of what is available, rather than the need for more.
- 4) Observe syndicates at work and ensure that they are not committing gross mathematical errors, or omitting fundamental aspects, such as passageways between items, access to doors and so on. Do not allow syndicates to waste their time because of such elementary mistakes.

- 5) Ensure that by the end of the session each syndicate has a completed layout together with suggested numbering system. If flip-charts or OHP transparencies are available, ask syndicates to transfer their own layout to one of these for presentation to the whole group in the following session.

Warehouse Layout Exercise

The secretary of the Utopian Farmers' Society concluded that the total space required for the society's new warehouse was 500 square metres. The committee had decided not to include cold storage facilities for members' apples, since they had finalised a contract for supplying freshly picked apples to a large wholesaler at a good price.

The Co-operative Bank approved the space estimate, but building costs had risen unexpectedly and there was a severe shortage of building materials. For a few days it seemed that the new warehouse would be delayed for many years while a new loan application was prepared and material was obtained, but at this stage a suitable building became available in a very convenient location. This building was 28 metres long by 20 metres wide, that is 560 metres in area altogether, and there was 3 metres clear to the eaves and 4 metres to the apex in the middle. There was room for future expansion on the site, the building was in good condition and it could be bought for \$20,000. The Utopian Farmers' Society grasped the opportunity, and the Co-operative Bank quickly made the necessary funds available and the building was purchased for the society.

The committee and the members were very pleased with their new building, and everyone wanted to vacate the old premises and move in as soon as possible. Some committee members suggested that everything should be brought to the new building the very day after the purchase was finalised, but the secretary persuaded the committee to allow at least a week, if not more, for him to decide what should be put where and whether any changes or additional equipment was required to be installed before the new building was occupied.

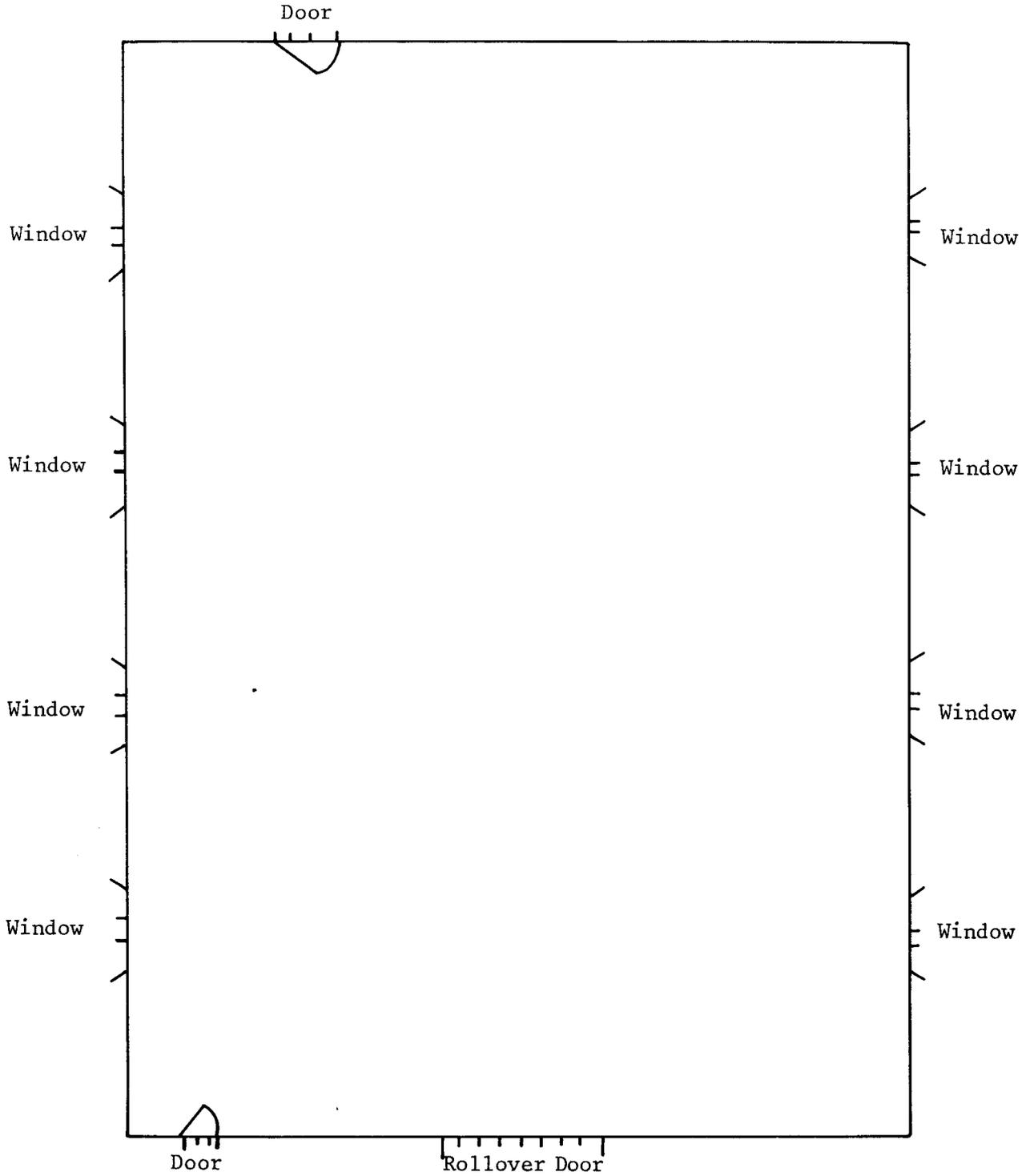
All this took place in January, when the storage requirement was approaching its annual peak; it was clearly vital to ensure that the move was made as smoothly as possible, and to instruct suppliers to deliver to the new building as soon as the layout plan was prepared. The secretary therefore decided to prepare an outline plan and to decide on any work which was necessary on the building, so that a start could be made with the work as soon as possible.

He prepared a rough sketch of the building, noting the location of doors, windows and so on, and tried to decide what should go where and whether any additional work was required before goods were moved in.

Assignment :

- 1) Scale the rough sketch up to fill as much as possible of a sheet of squared paper, and mark in windows, pillars and doors as indicated.
- 2) Refer to your earlier calculations of the space required for the items to be stored, and decide how the building should be used. Cut out pieces of cardboard as supplied to represent the space occupied by the various items, and decide how they should be arranged. Mark up a copy of your squared diagram of the warehouse to show how it should be arranged.
- 3) Draw up a list of any storage equipment or other items that may be necessary and that should be bought before goods are moved into the warehouse; ' this should include, if appropriate, a system for identification of location within the warehouse.

Outline Plan of Proposed Store  
for Utopian Farmers' Society



Overall Dimensions = 20m x 28m

SESSION 6.3

STORE LAYOUT

Objective : To enable trainees (a) to evaluate their own store layout proposals, (b) to identify the major constraints in determining layout and (c) to select appropriate storage equipment.

Time : 2 hours (excluding suggested study visit).

Material : Trainees' completed layout exercises and OHP or other large diagram of the "model solution" together with movable pieces to experiment with alternatives.

Session Guide :

- 1) Ask a representative from each syndicate to show briefly their plan, and to explain it. Encourage questions and criticism, and ensure that the following questions are asked for every suggestion:
  - Is the scaling correct?
  - Are windows and doors covered or left to fulfil their function?
  - Is sufficient area left for receiving, unpacking, inspection and making up orders and despatching goods?
  - Will the work flow neatly in the store?
  - Does the superintendent's office have a clear view of all parts of the warehouse that are security risks?
  
- 2) Display the "model solution" on OHP or flipchart. Compare it with syndicates' suggestions and point out that the model had the following features:
  - All windows are uncovered.
  - It is possible to walk completely around the inside of the outer wall of the building, to check on potential entry points for damp, vermine, thieves, etc.
  - The smaller faster moving items are all conveniently situated, none being more than two metres from a gangway.

- The office and counter are at the main entrance so that all goods inward and outward are under observation. The rear door will be locked and available only in case of fire so that there can be no entrance or exit unobserved.
  - The gangways are all two metres wide.
  - Possibly dangerous and smelling items (insecticide, weed killer) are stored together, away from agricultural produce and seeds.
- 3) Ask trainees to suggest what equipment or other facilities they recommend should be installed in the warehouse before the goods are moved in. Their answers should refer to:
- Shelving units.
  - Bins and racks.
  - Low platforms or pallets or other devices to keep bagged items away from the floor and to allow free air circulation.
- 4) Show on the "model solution" what might be required.
- Low platforms or pallets to cover both bagged item areas, i.e. 2 times 11 metres by 10 metres.
  - 5 standard wooden (or metal and wood) shelving units, 5 metres by 2 metres, for installation on the left side of the godown.
  - Construction of a simple "office" to shut out the worst noise and dust. This must have either large windows on both sides looking into the warehouse, or have only one metre high half walls.
  - Construction and installation of a counter, together with notice board and leaflet racks.
- 5) Ask trainees to suggest how they would tell an employee to put an item in a particular place, such as the middle of the galvanised sheet storage area. Discuss possible labelling systems and describe the examples suggested for the "model solution", namely:
- Complete floor laid out in grid pattern, A to L covering every 2 metres from the front to the back, and 1 to 10 covering every two metres from left to right. Letters and numbers, along with gangway identification lines, to be painted on warehouse floor before occupation.

- Item numbers on file and bin cards to match locations, for example: insecticide D1, D2, D3 and so on.
  - Orders for picking and packing to be listed for warehouse staff in the sequence of the warehouse, starting from L1 and working back to A10. This will allow staff to work from the back of the stores towards the front, selecting goods in sequence and avoiding unnecessary movement.
- 6) If time allows, discuss what kind of racks and shelves might be appropriate for each of the items in the exercise. Ask trainees to describe the types of storage equipment that are used in their societies, together with their advantages and disadvantages. The following questions should be asked about all types of equipment:
- What does it cost?
  - How versatile is it?
  - How easily can it be moved around the warehouse when necessary?
  - How robust and able to stand up to heavy shocks is it?
  - How effectively does it use the floor space it occupies?
- 7) If time allows, trainees should be taken to a co-operative or other similar warehouse, in order to see how the principles discussed in this section are or are not applied in practice.

Before the visit trainees should be divided into 3 syndicates; each syndicate should be allocated one of the following aspects:

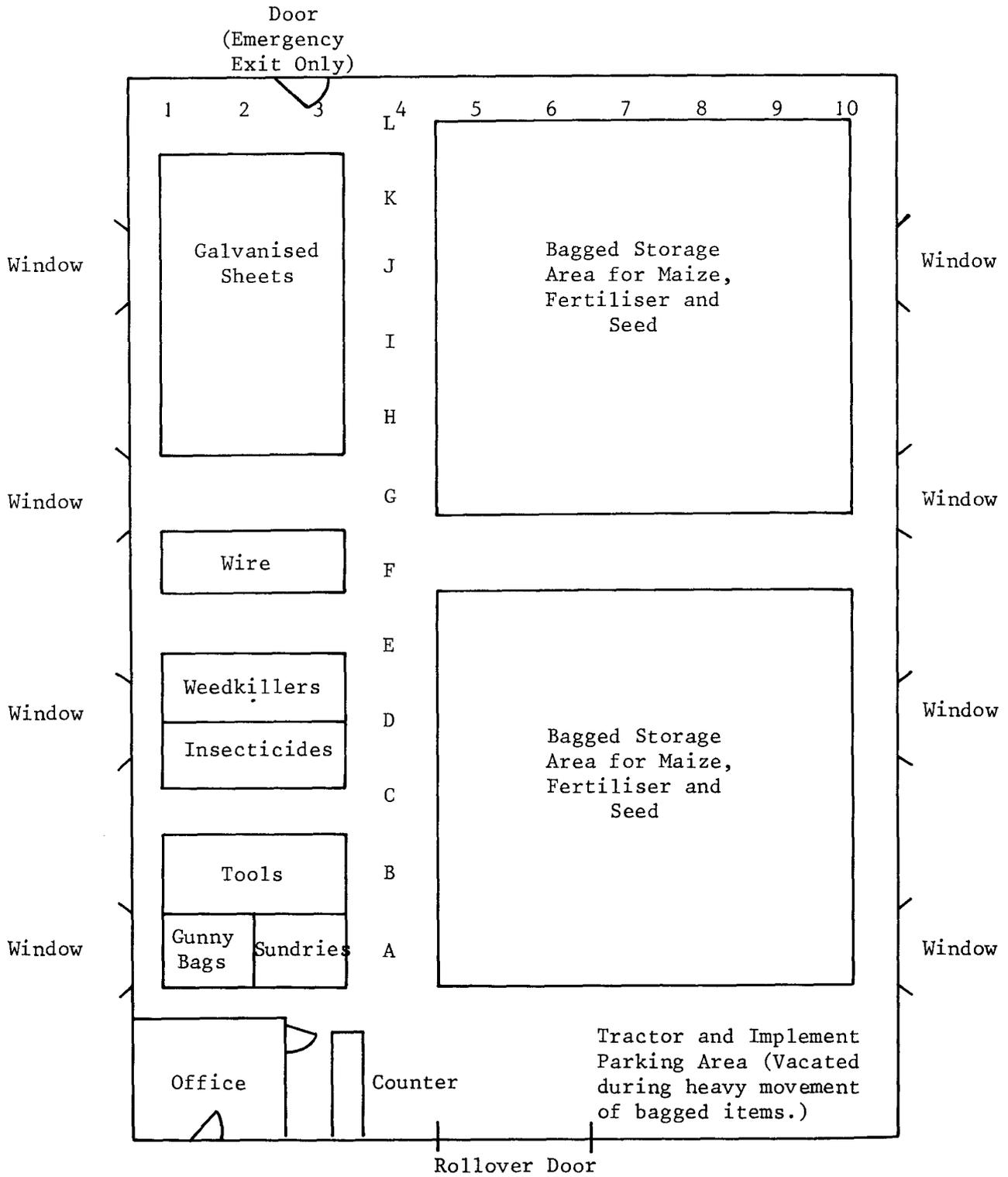
- security against theft and fire;
- recording systems;
- shelving and handling equipment.

Each syndicate should present, for the aspect it is looking into, an account of its findings after the visit, following this outline:

- a brief description of the storage system;
- a summary of its strength and weaknesses;
- some suggestions for improvement.

A representative of the warehouse management might be invited to hear the presentation and to respond to suggestions.

Suggested Layout For Utopian  
Farmers' Society Store



Overall Dimensions = 20m x 28m

topic

**7**

# stock control and stock-taking

Session 7.1 The Need for Stock Records

Session 7.2 The Need for Physical  
Stock-taking

Session 7.3 Stock-taking Procedures

SESSION 7.1

THE NEED FOR STOCK RECORDS

Objective : To enable trainees (a) to describe methods for recording the amount and value of goods in stock and (b) to state reasons why such records are necessary.

Time : 1 to 2 hours.

Material : Blank bin cards from trainees' societies.

Session Guide :

- 1) Ask trainees how long it would take them in their societies to find out the quantity in stock of a given item. Are the stock quantities of all items
  - immediately available?
  - entered up to date?
  - correctly calculated?
  
- 2) Ask trainees, to suggest the kind of problems which may arise if society management does not know how much of an item they have in stock, or if the figure they have is wrong.
  - Members are told they can have goods which are not in fact available.
  - Goods are not re-ordered in time.
  - Excessive quantities of goods are ordered and put into stock.
  - It is not possible to compile a balance sheet, and the effective financial management is thus impossible.
  
- 3) Ask selected trainees to describe to the rest of the group the system used in their societies to record stock movement. They should, if possible, bring blank bin cards and other stationery and describe how this is used in practice.

If possible the systems described should illustrate extremes in terms of simplicity and complexity. One should ideally be a simple

bin card recording no more than the date, quantity in and out and the balance. Another should involve several documents with reference numbers and so on.

- 4) Ask trainees to write down whether they agree or disagree with the following statements, which should be written on the chalkboard or OHP for easy reference. Trainees should think of their own societies if they feel that particular circumstances will dictate their answers. If in doubt, they should relate the answers to a society such as the Utopian Farmers' Society, which was described in the previous sessions on storage layout. Trainees should also note down their reasons for agreement or disagreement.
  - a) Bin cards should be kept on the shelf or bin where the goods are stored.
  - b) Bin cards should be kept in the office.
  - c) Bin cards should be filled in by the men who actually withdraw or put in the goods.
  - d) Bin cards should be filled in by office staff.
  - e) Bin card entries should be authenticated by the signature of whoever made the entry.
  - f) Bin cards should include reference numbers to support entries of quantities in or out.
  - g) Bin cards should be filled in for every stock addition or withdrawal, even if there are several every day.
  - h) Bin card entries should be accumulated and entered only once a day or weekly.
  - i) Bin cards should contain information on orders outstanding for the goods in question.
  - j) Bin cards should carry a complete description of the item together with the name and address of the supplier.
  - k) Bin cards should record the cost of each consignment added to stock, in order to facilitate issue and stock evaluation.
- 5) When trainees have completed their answers to the questions, ask for a show of hands to indicate the numbers agreeing or disagreeing

with each statement. The number should be recorded for all questions before discussing any.

- 6) Go through the questions, obtaining when possible arguments for agreement and disagreement. Opinions may differ, but in general a bin card should be a simple robust document, kept in a durable holder on or beside the goods to which it refers. Other information can be kept on file in the office as suggested in 5.1. Preferable answers to the questions are thus as follows (note responses on the chalkboard or OHP):

- a) Agree
- b) Disagree
- c) Agree
- d) Disagree
- e) Agree
- f) Disagree
- g) Agree
- h) Disagree
- i) Disagree
- j) Disagree
- k) Disagree

- 7) If none of the trainees' examples illustrated a simple design, draw a typical five column layout for a bin card on the board.

Date	In	Out	Balance	Signature

- 8) Discuss the kind of material to be used for a bin card (card rather than paper). Discuss how to keep and protect the bin card when it is actually in use in the warehouse, i.e. when it will be on top of or beside the item it is listing. (e.g. provide holders for each card, fixed to storage racks.)

SESSION 7.2

THE NEED FOR PHYSICAL STOCK-TAKING

Objective: To enable trainees (a) to identify the ways in which routine stock controls can fail to provide accurate data, and (b) to determine when and why physical stock-taking may be necessary.

Time: 1 - 2 hours.

Material: Sample bin cards.

Session Guide:

- 1) Divide the group into syndicates and distribute to each syndicate the two sample bin cards together with a case study sheet. Allow syndicates up to 20 minutes to complete the assignment.
- 2) Reconvene the group, and ask syndicates to list the errors. These should be:

Insecticide:

- Mathematical errors on 20th March and 30th March (last entry).
- Suspicious gap of no entries between the 20th and 28th March, although insecticide appears to be issued daily at other times.
- Unexplained and unclear annotations on 15th and 28th March.

Boots

- Card damaged so that entries from 21st March to 30th March are illegible.
  - Unexplained corrections on the 13th March and 2nd April.
  - Mathematical error on 16th March.
- 3) Ask trainees to suggest all the possible reasons why bin cards may be inaccurate.
    - Mathematical errors.
    - Faulty transfer from one card to the next.

- Damage to the card.
  - Illegible writing.
  - Wrong items or sizes entered on the card.
  - Card may be lost altogether.
  - Staff may forget to make entries.
  - Dishonest staff may falsify entries.
- 4) Ask trainees to suggest what the manager of the Utopian Managers' Society should do. Suggestions may include:
- Explain to staff why bin cards are important, and train them how to make entries correctly.
  - Provide holders for each card, fixed to storage racks so that locations are always clear and fixed.
  - Start himself to check bin cards on a regular but random basis.
  - Instruct staff never to make annotations but to bring all queries to the manager as soon as they are discovered.
  - Carry out a physical stock check on all items as soon as possible, identifying and correcting errors and thus providing a basis for future improved operation of the bin card system.
- 5) Ask trainees to suggest when stock checks should be carried out. Nearly every institution conducts stock checks at the end of its financial year, but others may carry them out more frequently. The disadvantages of frequent stock checks are as follows:
- Expense.
  - Inconvenience to members because warehouse must be closed.
  - Inconvenience to suppliers for the same reason.

It is probably better to carry out a complete stock check every year but also to check one item every day or week, as time permits, throughout the year.

Other occasions when a stock check should be carried out:

- Change of manager.
- If there is a special reason for believing that the leakage is high.

The Bin Card Problem

The secretary of the Utopian Farmers' Society installed what he thought was a foolproof stock control system when the society's stock was moved into the new godown. Every item had its own bin card, which was kept with the goods. Staff were told that they must enter every movement of stock in or out on the card at the time when they moved the goods. There seemed to be no room for error. The secretary was very keen to promote the society's services among members, and tried to spend as much time as possible out of the office, visiting members and discussing their needs with them.

He was not discouraged by bad weather and one day, in spite of heavy rain, he decided to go out. He needed a new pair of rubber boots and asked the storeman if there was a pair of size 43 in stock. The storeman checked the card and said that there were plenty. The secretary went down to the godown to get a pair, intending of course to charge them to his own account.

He found boots of all sizes heaped together at one end of the store rack. At the beginning he had instructed that every size of every item should have its own bin card and he found the bin cards for most sizes of boots on the floor under the rack. The card for size 43 was lying on the rack beside the boots, since the storeman had just looked at it. The card was torn, dirty and splashed with paint. There were no size 43 boots to be found on the rack.

The secretary was most annoyed and the storeman was apologetic. He explained that since boots were not very important items, and were easy to count, the bin card had been neglected. He produced a card for one litre insecticide cans which was, he said, more typical. The secretary took both cards to his office. He studied them and found a number of problems and wondered what he should do.

Assignment :

- 1) Identify all the errors and opportunities for mistakes in the two bin cards, and list them.
- 2) Be prepared to advise the secretary on what he should do to improve the situation.

ITEM: One Litre Cans Brand x Insecticide

DATE	IN	OUT	BALANCE	SIGNATURE
10 MARCH			% 43	MH
13 MAR	24	9	58	EW
13 MAR	<del>24</del>	12	46	EW
14 MARCH	-	1	45	MH
15 MARCH	-	3	42	MH
15 MARCH	36	5	73	MH (damaged) <sup>3</sup>
16 MAR	-	10	63	EW
16 "	-	1	62	JM
17 "	-	41	21	JM
17 "	-	17	4	EW
20 MAR	. 72	25	53	EW
20 MAR	-	2	51	EW
20 MAR	-	5	46	JM
28 MARCH	24 (BRANDY)	10	60	MH
28 MARCH	-	7	53	MH
29 MARCH	60	18	95	MH
29 "	-	7	88	EW
30 MAR	-	31	57	EW
30 "	-	17	40	JM
30 "	26	9	55	JM



SESSION 7.3STOCK-TAKING PROCEDURES

Objective: To enable trainees to plan and implement stock checks.

Time: 2 - 2 1/2 hours.

Material: Tape dialogue - Stock-taking.

Session Guide:

- 1) Ask how many trainees have actually directed or participated in a physical stock-taking. Explain, if necessary, that stock-taking is the process of physically counting all the items in a warehouse at a given time, to find out exactly what is in stock. Refer to the previous session, and remind trainees that bin cards alone do not provide a completely accurate record.
- 2) Ask trainees to suggest what may be the effects on accounts of faulty stock figures. Illustrate by the following example:

Opening Stock	\$ 2,500	Sales to Members	\$ 10,000
<u>Plus</u> Purchases	<u>9,500</u>		
Total	12,000		
<u>Less</u> Closing Stock	<u>2,500</u>		
Cost of Goods Sold	<u>\$ 9,500</u>	Gross Surplus	\$ 500
If Closing Stock is wrongly estimated to be			
Cost of Goods Sold			\$ 2,250
			\$ 9,750
Gross Surplus			\$ 250

That is, a 10% error in stock count or valuation can delude management and members into believing that the surplus is half what it really is (or double).

- 3) Warn trainees that they are about to hear an account of a co-operative society's attempt to count the goods in stock in the warehouse. They will hear that all did not go well. They must listen carefully and every time they hear about something that went wrong, or a mistake that was made, they must quickly note it down. They

will then be asked to meet in syndicates and to construct a list of rules for stock-taking, based on what they have just heard. The syndicate with the most complete list will be judged the winner of the stock-taking game.

- 4) Ensure that members of each syndicate are seated adjacent to one another, and that everyone can hear the tape or the reading.
- 5) Play the tape, or enact the dialogue. If trainees wish, repeat it and then allow syndicates up to 30 minutes to write down their lists. These should be completed in duplicate and carbon paper may be provided for this purpose.
- 6) Collect one copy of each list and go through the various rules and procedures, checking against the "model" list. Trainees need not have used the same words as in the "model" list, and may have combined one or more rules into one, or subdivided one rule into two or more. The words and number of points are unimportant. The syndicate which has most nearly covered all the points, plus any others, should be adjudged the winner.

#### "Model" List

- Arrange stock-taking at a time when stocks are low.
- Arrange stock-taking over a week-end or at another time which minimises inconvenience to members and suppliers.
- Warn all users of the goods in store that the godown will be closed for stock-taking so that they can cover their requirements in advance.
- Warn all suppliers that the godown will be closed for stock-taking.
- Ensure that all bin cards are brought up to date and balances calculated as at the time the godown is closed for stock-taking.
- Remove all bin cards from the goods to which they refer and place them in the office away from the checkers.
- Restrict entry to the godown to those involved in the counting only.
- Ensure that absolutely no goods are moved into or out of the godown during the stock-taking.

- Divide checkers into groups, each consisting of two who can count and write plus, if possible, a labourer to remove, clean and replace goods as they are counted.
- Prepare a plan of the godown and allocate areas to each group of checkers according to the plan.
- Ensure that checkers check according to the ground plan, and not according to any list of goods, since items which are not listed will thus be missed.
- Count goods from the top of the shelves downwards, to recognise and replace items which may have fallen from higher shelves and been replaced in the wrong position.
- Check off each area as it is completed with a chalk mark on the shelf or floor.
- Look for any goods which appear to be obsolete or damaged, and take decisions as to writing them off or removing them.
- Check and note down any damaged storage equipment for follow-up action after the stock-taking has been completed.
- Clean and re-organise any shelves or items which are dirty or untidily stored.
- During stock-taking never bring together any goods which have been inadvertently stored in two or more places. A stock check is done according to ground plan, not according to any list of goods. Make a note however of the wrongly placed goods, so that they can be moved to their right place after the stock-taking has been completed.
- Add up the totals (quantities of wrongly placed goods to be added to quantities of same goods stored in the right place) and check and sign them before looking at the totals on the bin cards.
- Checkers should write descriptions of goods as they are counted, and not work from pre-prepared descriptions, which may omit items or sizes.
- Double check that there is no opportunity for staff to change bin cards or physical results to prevent discovery of discrepancies.

- 7) Ensure that every trainee understands the reason for each "rule".  
If trainees are familiar with other procedures, ask them to explain and discuss the advantages and disadvantages of alternative methods. Prepare and list a summary of rules which trainees can use when organising stock-taking in their own societies.

Dialogue

After discovering that the bin card system was not perfect, the secretary of the Utopian Farmers' Society decided to carry out a stock check and to count everything in the warehouse. He found it a difficult task however and some other people in the society did not sympathise with his problems. One member was particularly irate.

Member: Look Mr. Secretary, they told me in the office that the godown was closed today of all days, market day, when we come to the village to buy things. Is that how you treat members? I must have my seed now, and I've come to get it.

Secretary: I'm sorry, it's impossible. We're closed for stock-taking as you can see.

Member: I'm not sure what you mean, but I'm going to see the President this very afternoon, and tell him what I think of it.

Secretary: I think he'll understand, though I'm not sure he knows. Still, we must get on with it. Joe, have you finished counting those bags yet?

Joe: Not yet sir, there are hundreds of them, it's the largest number we've ever had in here I should think.

Secretary: What's that horn blowing Bill?

Bill: It's the lorry from the fertiliser people - they've brought that load of triple supers we were chasing up.

Secretary: Why on earth did they have to come today of all days? Ask them to come back tomorrow, will you Bill?

(Pause)

Bill: They've gone away, they say they will deliver the load somewhere else, and maybe we'll get some next week. They're not sure.

Secretary: Oh dear, I hope they keep some for us. Anyway, we must get on with this job. Joe, have you got the bin card for this insecticide?

Joe: Yes, here it is, let me just add up the balance from the last few issues...

(Pause)

...yes, that's 104 take away 4, take away 10, take away 9, that makes 81. There we are. How many did you find Bill?

Bill: Wait a minute, what was it? ...Oh yes, 81 - that was it.

Secretary: What do you want? Drivers aren't normally allowed into the warehouse anyway.

Driver: ' Sorry, but I've come to pick up a couple of things for the President, I'll give you a note for them later.

Secretary: Be sure you do, we're in the middle of stock-taking.

Bill: What shall I count now, I'm finished with the insecticide?

Secretary: Let's see, go on to that rack of weed killers, that's next on the stock list.

Bill: O.K., here goes, it's slow work though, they're so heavy and you can't see what's at the back without moving them out. Where's Alex, can't he help? (shouting) Alex!

Alex: (from a distance) Yes, what do you want Bill?

Bill: Give us a hand here with these drums.

Alex: I'm counting iron sheets back here, I shan't be long, could you come and write down the numbers for me? I'm a bit shaky with figures you know, because I was fighting in the forest when you young chaps were in school.

Secretary: Come on now, get on with the work. Now, what's this tin here? Maybe it fell down from higher up, ah yes, this looks like it, we'll put it up there.

Joe: Hey, did I count this shelf or not? I can't remember.

Secretary: Eh yes, wait a minute, maybe not, anyway, count it again, no leave it and go on.

Bill: Some of these drums have fallen over and are half empty, what shall we do about them?

Secretary: Oh, well, we'll have to think, count them as full for now, but put them at the front so that we remember them.

Joe: Gosh, look here, I don't think anybody has used this sort of chemical for years, and it says "twelve months shelf life expiring in..." oh dear, that's three years ago! I wonder why we've had it so long in the old place, we might as well have left it behind. Still, shall I chuck it out?

Secretary: Oh no, it's in the books so put it on the shelf and count it. We'll decide what to do with it some other day.

Alex: Thanks for helping me. Look, this rack is very badly damaged where the lorry backed into it last month. Shouldn't we get it repaired?

Secretary: Of course, but let's do one thing at a time. We're stock-taking now, we'll think about that later. Why are you taking so long with that lot Joe?

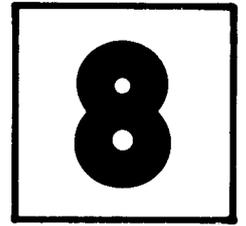
Joe: The stuff is all over the place, and filthy too, I'm just cleaning it all up a bit.

Secretary: Never mind that now, just remember to do it tomorrow. Get on with the counting as fast as you can.

Bill: Look at this stuff. Isn't it the same as the chemical back there I counted hours ago? What's it doing here?

Secretary: It looks the same, so add it to the figure you got for the last lot and let's move it over there.

Joe: (to himself) Thank heavens I looked at the figure for these boots, I'd better add five pairs on or someone might ask awkward questions later on.



# issues, pricing and procedures

8.1 Stock Valuation

8.2 Pricing

8.3 Issues and Invoices

SESSION 8.1

STOCK VALUATION

Objective: To enable trainees (a) to distinguish between the various ways of valuing stocks, and (b) to select the most appropriate for any situation.

Time: 2 - 2 1/2 hours.

Session Guide

1) Ask trainees why it is important to know not only how many items are in stock, but also how much they are worth. Answers should include:

- To calculate selling prices to members.
- To calculate gross surplus and profitability.
- For insurance purposes.
- To compile useful sales statistics.

2) Ask trainees to value the following stock items (write the details on the chalkboard/OHP for easy reference):

Fencing Wire - 100 Rolls

- 10 purchased when cost was \$10 per roll.
- 40 purchased when cost was \$11 per roll.
- 40 purchased when cost was \$12 per roll.
- 10 purchased at current cost of \$15 per roll.
- Selling price to members \$17.50 per roll.

3) Allow trainees to finish their calculations. Ask for their answers which may include the following figures:

- \$1,000 or \$10 each.
- \$1,170 or \$11.70 each.
- \$1,500 or \$15 each.
- \$1,750 or \$17.50 each.

If any of these answers are not given by trainees, give them and show that they are equally legitimate. Ask trainees what the effect of differences of this order might be on (a) annual surplus calculations, (b) insurance claims, (c) selling prices.

4) Ask trainees to explain how they reached their answers. The different and equally correct figures arise as follows:

- \$1,000 Valued at cost of earliest stock.
- \$1,500 Valued at current cost.
- \$1,170 Valued at average cost.
- \$1,750 Valued at selling price.

5) Ask trainees to suggest arguments for and against each method of valuation. These may include:

Earliest Cost

For :

- Correct cost price for items issued if, as is normal, old stock is used first.
- Prevents higher prices being charged to members.
- Members can understand and agree on costs easily.
- Old stock will remain cheap, thus encouraging more rapid sale.

Against :

- Does not provide funds for replacement of stock at current prices.
- Undervalues stock for calculation of surplus.
- Costs will change haphazardly, as low priced stock is exhausted.
- Leads to overcharging in event of falling prices.

Current Cost

For :

- Cost is actual market price, which represents today's value.
- Allows for replacement by repurchase.
- Insurance or similar claims for replacement are correct.

- Value will change as costs change, so that staff and members will appreciate real up to date prices.
- Societies' surplus gains the benefit of stock holding.

Against:

- Old stock will be charged at new prices, members will object.
- Members themselves will not gain from the stock holding by societies.
- Stock will be over-valued for accounting purposes, thus artificially inflating the surplus.
- Warehouse staff may tend to leave old stock and issue new stock to avoid member complaints.
- Stock profits will encourage over stocking.

Average Cost

For:

- Total figure is the true cost of goods in stock.
- Average figure per item apportions the benefits of stock holding fairly over all items and thus to all members whenever they purchase.
- Total figure will be the actual amount of money invested in stock.

Against:

- Complicated calculations necessary to work out the cost.
- Figures will change every time stock is delivered or issued.
- Total figure will be insufficient to cover replacement at current prices.

Selling Price:

For:

- The figure can be set by management and changed as they wish.
- Members and others are aware of the potential value of all the stock.

Against:

- Surplus is taken into the accounts before it has been "earned" by a sale.
  - A lower cost must also be kept for surplus calculation purposes.
- 6) Ask trainees if they can think of any other methods. Some organisations use a "standard" cost which is estimated by management at the beginning of the accounting period. It is based on their assessment of what the average cost will be over the period. This is difficult to estimate and must be readjusted if inflation or other factors move unexpectedly.
- 7) Explain to trainees the significance of the terms L.I.F.O. and F.I.F.O.

L.I.F.O. = "last in first out", i.e. the use of the latest cost figure (current cost) for stock valuation.

F.I.F.O. = "First in first out", i.e. use of the earliest cost for stock valuation.

The use of L.I.F.O. for stock valuation does not mean that stock issues should be on the same basis; the oldest item in stock should always be used first whatever value is used for charging it out.

- 8) Ask trainees which method they use in their own societies. Some may not know, but in general L.I.F.O., or current costs, should be used. Rising prices are unfortunately the norm, and a society which sells supplies at prices based on older lower costs may well not have enough money to replace items sold with new stock.

Make sure all trainees understand this.

- 9) Ensure that all trainees understand the different methods and the reasons for choosing L.I.F.O., by asking them to complete simple examples such as the following, salient features of which should be written on the chalkboard/OHP for easy reference.
- A society sold fertiliser to the value of \$10,000 in a year at a price of \$10 per 50 kilogram bag.

The stock and cost figures were as follows:

- Opening stock, 100 bags which had been bought for \$6 each.
- Purchased during the year:
  - 1,000 bags at \$8 each and
  - 100 bags at \$9 each.
- Closing stock 200 bags.

What is the surplus on the fertiliser business, and what is the closing stock worth?

<u>Using L.I.F.O.</u>	\$
Opening Stock (100 at \$6 each)	600
Purchases:	
1,000 at \$8	8,000
100 at \$9	<u>900</u>
Total	9,500
Less closing stock (200 at \$9 each)	<u>1,800</u>
Cost of goods sold	<u>7,700</u>
Sales	10,000
Gross Surplus	2,300

This includes a "stock profit" of \$100.

Bags in stock/purchased during period:

Opening stock	100
Purchased (1,000 + 100)	<u>1,100</u>
Total	1,200
Less closing stock	<u>200</u>
Number of bags sold	1,000
(assuming oldest stock goes first)	i.e.
Opening stock, purchased at \$6	(100)
Bags purchased at \$8	(900)

Left: 100 bags purchased at \$8 each (validated at \$9; stock profit \$100)

+ 100 bags purchased at \$9 each

= 200 bags (closing stock)

Explain to trainees that stock profits should be recognised as such at the end of the trading periods, i.e. when the goods are actually sold. In spite of this complication, L.I.F.O. is, however, the most effective method of stock valuation.

SESSION 8.2PRICING

Objective : To enable trainees to set prices on items sold to their members.

Time : 1 1/2 - 2 hours.

Session Guide :

- 1) Ask trainees to imagine that they must set a price on Product X which cost their society \$1 to buy. They must choose between \$1.10 and \$1.20. Which figure would they choose:
  - a) from the point of view of serving the members,
  - b) from the point of view of covering the society's costs and generating a surplus?
- 2) Most trainees will suggest:
  - \$1.10 from members' points of view.
  - \$1.20 from the society's point of view.

Ask how the lower price might be better from both points of view. If trainees are unable to make any suggestions, ask them to assume that sales of Product X would be 1,000 units per year at \$1.20. What would be the total surplus generated? (20 cents x 1,000 or \$200.)

What would be the total surplus at \$1.10?

Trainees may answer \$100, but ask them to consider what the effect on the number of sales may be if the goods are sold at a lower price.

- 3) Ask trainees to attempt to work out how much extra sales would be needed to make the price of \$1.10 better for the society's surplus as well as for the members.
  - Total surplus at \$1.20, 1,000 x 20 cents = \$200.

To earn \$200 with 10 cents margin each, sales would have to be 2,000 units.

If sales could be expected to double or more than double by lowering the price, it would be in everyone's interest to do so.

- 4) Ask trainees to work out the answer for the following similar products by filling in the last column:

Products	Cost	Existing Price	Existing Sales	Proposed Price	Necessary Volume to Achieve Equal Surplus
A	\$ 10	\$ 12	50 units	\$ 10.50	(200)
B	\$ 6	\$ 7	300 units	\$ 6.75	(400)
C	45 cents	50 cents	10,000 units	49 cents	(12,500)
D	18 cents	20 cents	15,000 units	19.5 cents	(20,000)
E	77 cents	80 cents	12,000 units	79 cents	(18,000)

These figures should be placed on the chalkboard/OHP. Before proceeding to the next point ensure that all trainees are able to calculate the figures without assistance.

Ask trainees what kind of products are likely to be bought in greatly increased quantities, because of a price reduction.

- Items which members are currently buying at the same price from independent traders (a small price reduction may bring an immediate large increase).
- Items which are easily substituted for another product (e.g. cattle spray versus chemical for dipping cattle).
- Items where the price reduction is, in itself, unimportant but can nevertheless greatly encourage increased usage, if effectively promoted and publicised, since everyone likes a bargain.

What kind of items are not likely to sell in greater quantities because prices are reduced?

- Items which are often in short supply.
- Items which members are already buying in reasonable volume.

- Items which are only of use to a small number of members.

- 6) Ask trainees to describe how they actually set prices in their societies. Are societies free to alter prices of most goods or are the prices laid down by suppliers, or by government regulations?

In many cases the bulk of farm supplies has to be sold at controlled prices. Societies have to determine their own prices only for a small proportion of what they sell.

Ask trainees what methods they use when deciding on prices, when they are free to decide. Answers may be phrased in many different ways but should be able to be classified into the following categories:

- a) Add on a standard mark-up percentage.
  - b) Find out what other societies or suppliers are charging, and charge the same.
  - c) Charge as much as you feel members will be willing to pay.
  - d) Charge as little as possible, in order to cover operating costs and earn whatever surplus is deemed desirable.
- 7) Discuss the relative merits of each approach:
- a) is simple but arbitrary and makes no allowances either for varying handling costs, or for the different stocks which may be required.
  - b) is difficult; it deprives members of possible cheaper sources of supply and may perpetuate inefficiency or extortion.
  - c) is not consistent with the aim of a co-operative society to serve its members.
  - d) is the best way, but is difficult to implement in practice.
- 8) Ask trainees to consider the following problem which should be written on the chalkboard/OHP for easy reference:

Society X Farm Supply Department

Total operating costs per year		\$ 10,000
Total sales of goods at fixed prices	\$ 88,000	
Cost of above goods	<u>\$ 80,000</u>	
Surplus earned on fixed price goods		<u>\$ 8,000</u>
Balance of operating costs to be covered		\$ 2,000
Target surplus		<u>\$ 3,000</u>
Total extra surplus needed		<u>\$ 5,000</u>
Previous year's sales of free price goods		\$ 20,000
Previous year's cost of free price goods		<u>\$ 17,000</u>
Surplus earned		<u>\$ 3,000</u>

Assuming that no new items can be stocked, how can the society use price changes to reach the necessary surplus of \$5,000?

- 9) Trainees may suggest:
- Increase prices by 10%. If volume remains the same this will yield the required \$2,000 extra surplus.
  - Maintain prices, since members may buy more and a small surplus will still be earned even if they only buy as much as they did last year.
  - Reduce prices by say 5%. If sales increase to \$30,000 this will achieve the \$3,000 surplus earned last year; if they increase to \$50,000 this will achieve the needed \$5,000 surplus.
- 10) Ask trainees how the society management can try to find out whether price reductions would have these effects:
- By testing the effect of a few well-publicised experimental price reductions, using the type of goods on which prices could be reduced.
- 11) Stress that members' interests are not served by low prices which lead to losses and eventual collapse of the society. Management must attempt to set prices from which members benefit in terms of good value and reasonable surplus for re-investment and distribution to members.

SESSION 8.3

ISSUES AND INVOICES

Objective : To enable trainees (a) to appraise, (b) to plan and (c) to operate effective systems for issuing and invoicing goods from a co-operative farm supply store.

Time : 1 - 2 hours.

Material : Trainees' societies' cash sale tickets, receipt forms and invoices.

Session Guide :

- 1) Ask trainees why it is necessary to have documentation to control issues of goods. Why should members not be allowed to take out what they need without paper work, so long as they pay? Trainees may suggest three main reasons:
  - a) To ensure that goods are paid for.
  - b) To assist with stock control and recording.
  - c) To maintain records for members' patronage refund.
  - a) is all important.
  - b) Correct bin card entries, and regular checking of bin cards to see if stocks have fallen to re-order points, are all that is necessary for stock control.
  - c) Nothing is gained by being able to associate issues to particular members' requirements; a simple ticket system, recording only the amount of money and the member's number, should cover patronage refunds.
- 2) Ask trainees to describe the various ways in which (a) goods leave the warehouse and (b) payment is made. (Apart from the obvious case when a member comes to buy something and pays cash before taking it away.)
  - Goods are delivered for payment on delivery.

- Goods are ordered to be delivered, and are charged to the member's account.
  - Goods are collected by the member and then charged to his account.
  - Goods are returned to suppliers for credit.
  - Goods are supplied to other departments of the society, and an internal charge is raised.
- 3) Ask trainees to give examples of situations where their societies have not been paid for goods that have been delivered. How have these mistakes occurred? Replies will generally fall into three categories (exclude the situation where goods were received by and charged to the member, but the member cannot pay because of lack of funds):
- i) There was no clear evidence of receipt of goods by the member, so that the charge was contested.
  - ii) Goods were received by but never charged to the member.
  - iii) Goods were paid for but the money never reached the society.
- 4) Ask trainees to suggest the basic minimum procedure necessary to prevent these errors and which can cover all the types of transactions mentioned in 2) above.
- Goods paid for and collected: Cash register, or written receipt signed by co-operative staff member.
  - Cash on delivery: Receipt for goods signed by member, and countersigned "paid" by co-operative staff. One copy kept by society and one by member.
  - Goods delivered and charged to member's account: Receipt for goods together with instructions for charging to account, signed by member when goods delivered.
  - Goods collected to be charged: As above.
  - Goods returned to supplier for credit: As above referring to supplier's account and not to a member's, with price adjusted accordingly.
  - Goods transferred within the society: As above, with a note of the account to be charged.

- 5) Allow trainees some fifteen minutes to draft a suitable form to cover all these situations. They should not refer to their own societies' paper work at this stage. Documents should be simple and clear. An example might be as follows:

UTOPIAN FARMERS' SOCIETY		Date <i>March 10, 1980</i>
Number: 12345		
<u>Goods</u>		
. . . 10. Bags Fertiliser @ \$.5 . . . . .		. \$ 50 . . . . .
. . . 1. Roll Wire @ \$.15 . . . . .		. . 15 . . . . .
Received <i>J. Smith</i> . . . . .		
Membership . . . 4218 . . . . .		
TOTAL		\$ 65
<u>Payment</u>		
Cash Received <i>A. Brown</i> . . . . .		. \$ 15 . . . . .
OR		
Charge to Account <i>J. Smith</i> . . . . .		. . 50 . . . . .
TOTAL		\$ 65

- 6) Ask trainees to compare the procedure and form that they have discussed with those used by their societies. Ask a representative from each society present to analyse his society's system, by asking the following questions:
- Could any two or more forms be combined into one?
  - Do members or co-operative staff have to write the same information, more than once, on any form or series of forms which are filled in at the same time?
  - Is every piece of information in every form used for some purpose?

- What happens to every copy of every form? Does somebody do something as a result of receiving each copy?
- If so-called necessary forms, or copies, were quietly eliminated, would anyone notice or object?
- Do mistakes still occur, in spite of apparently foolproof systems? If so, is too much trust being put in procedures and not enough in good staff selection, training and supervision?

# farm supply promotion

9.1 The Need for Promotion

9.2 Promotion Methods

9.3 Promotion Campaigns

SESSION 9.1

THE NEED FOR PROMOTION

Objective: To enable trainees to explain the different reasons why members may not buy farm supplies from their co-operative societies.

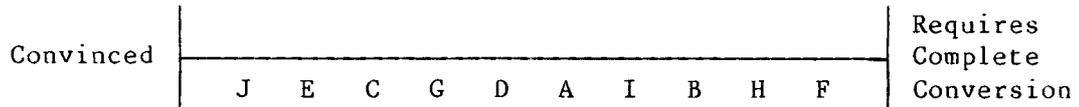
Time: 1 1/2 - 2 hours.

Material: Tape dialogue and transcript.

Session Guide:

- 1) Divide trainees into syndicates. Give each trainee a copy of the background paper and ask them to read it carefully. Play or enact the dialogue, allowing two or three minutes between each reply. A copy of the written transcript may also be given to each syndicate. If trainees ask for it, the dialogue may be played/enacted a second time.
- 2) Allow syndicates up to 30 minutes to complete the exercise as described in the background paper.
- 3) Ask syndicate representatives to give their explanations for the ten answers. Do not obtain an answer from each syndicate for each response, unless there are significant differences of meaning, and not merely differing choices of words. A possible list might be as follows:
  - Farmer A is mistrustful.
  - Farmer B is ignorant.
  - Farmer C is disappointed.
  - Farmer D is frightened.
  - Farmer E is unconvinced.
  - Farmer F is complacent.
  - Farmer G is insecure.

- Farmer H is resigned.
  - Farmer I is confused.
  - Farmer J is convinced.
- 4) Ask syndicates to present their suggestions for how each answer should be placed on the "line of conviction". Opinions may legitimately differ, but a reasonable suggestion is as follows:



- 5) Discuss the type of arguments needed to "convert" each farmer. Elicit that the further away from conviction the farmer is, the more promotion will be needed to convert him into a customer. Stress that consequently every farmer need not pass through each stage of the conviction and promotion process.
- 6) Show, by example, why it is necessary to identify the reasons for a member's willingness to buy. It can be a waste of time, or even counterproductive, to use arguments which are appropriate for one type of objection, to counter another.

Example:

It would be pretty unproductive to try to convince Farmer I, for instance, to buy from UFS by saying that prices of products sold by the Utopian Farmers' Society are much lower than those of the private traders.

The Reluctant Members - Background Paper

The Utopian Farmers' Society has been appointed sole buyer for the staple crop of its area, so that all farmers are automatically members of the society. Farm inputs can still be bought from private traders. The society has for some time offered a complete range of the necessary farm supplies, at generally lower prices than those charged by private traders and with credit when appropriate. The results, however, have been disappointing. Only about one third of the farmers regularly buys supplies from the society.

The secretary spoke to a number of farmers at the market, and received these replies. He wondered whether an analysis of them might give him some idea as to how the society might convince members to make more use of the society's Farm Supply Service.

Assignment

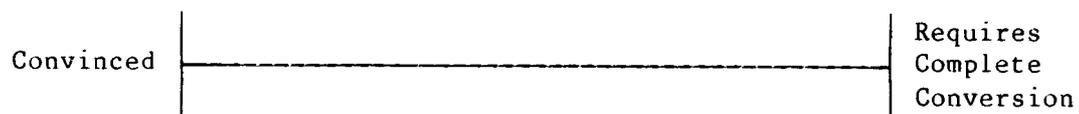
Listen to the ten different farmers interviewed by the secretary.

- 1) Choose a word which best describes the underlying reason for each farmer's behaviour.

Example: "Farmer X is sceptical."

Produce a similar sentence for each farmer.

- 2) Draw a line to represent the range of attitudes, from total acceptance of the Society's Farm Supply Service to unawareness of the need for such a service.



"Place" each farmer's reply along this line, according to how near, or far, you believe them to be from total acceptance or rejection.

- 3) If time permits, discuss the kind of arguments which might be effective in persuading each farmer to move further to the left along the line.

The Reluctant Members - Dialogue

Narrator: The secretary of the Utopian Farmers' Society was concerned that only about one third of the farmers in the area regularly used the society's Farm Supply Service, although the society provided a full range of what was needed. Prices which were generally lower than those from private traders, and credit was available when appropriate. He interviewed a sample of ten farmers, in an attempt to find out how the society could convince them to use the Farm Supply Service. He asked each farmer whether he bought his supplies from the Utopian Farmers' Society, and received ten different answers.

Secretary: Farmer A, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer A: No, I don't. I'm not really sure what they're up to. It all looks too good to be true, and I'm sure that it's a government trick to get more taxes out of us or something.

PAUSE

Secretary: Farmer B, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer B: Surely the society only buys our crops, doesn't it? It's a marketing society and we still have to get our supplies where we can, don't we?

PAUSE

Secretary: Farmer C, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer C: I did get a few bags of seed from them last year, but they didn't do very well, maybe it was old stock. I don't know, but I haven't bought anything from them since.

PAUSE

Secretary: Farmer D, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer D: I would like to, I believe they're very good, but I've always bought from our village traders. They are powerful people you know, and I should not like to offend them. You never know when I may need their help again.

PAUSE

Secretary: Farmer E, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer E: I've just bought some insecticide from them, just to give it a trial. I'm not sure whether I'll change over to them completely, I'll have to see how it goes.

PAUSE

Secretary: Farmer F, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer F: Good Lord no, I've always bought from the local traders. The prices seem reasonable to me, and my little farm gives me everything to satisfy my needs.

PAUSE

Secretary: Farmer G, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer G: I've thought about it, but most of the big farmers round me still buy from the traders. They are richer, wiser men than me, and I've done all right in the past by following their example. I'll just watch what they do.

PAUSE

Secretary: Farmer H, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer H: No, I don't believe in these new ideas. We have always been exploited by the traders, and I suppose we shall be. It's God's will we should have to struggle for a living, and at least we know where we are at the moment. Who are we to try and change things?

PAUSE

Secretary: Farmer I, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer I: No, I don't think I'm qualified yet. I thought I had to deliver a certain quota of maize for two years before I was allowed to buy my supplies from the society.

PAUSE

Secretary: Farmer J, do you buy your farm supplies from the Utopian Farmers' Society?

Farmer J: Oh yes, I've been buying everything I need from the society for over twelve years. I get good products, at reasonable prices, I can't think why everyone doesn't do the same.

SESSION 9.2

PROMOTION METHODS

Objective: To enable trainees (a) to identify the various forms of promotion communications available to them, and (b) to select the most appropriate method to overcome different forms of reluctance to purchase goods.

Time: 1 - 2 hours.

Session Guide:

- 1) Ask trainees to write down on a sheet of paper as many different ways as possible of communicating with members (the ways must naturally be those which are, or might be, available to a co-operative society).
- 2) Ask trainees to mention one method each. Produce as long a list as possible on the chalkboard/OHP. All the following methods should be mentioned, and possibly others, such as telephone, radio or television which may be available locally.
  - Meeting.
  - Individual contact by society's staff.
  - Letters.
  - Advertisements.
  - Posters.
  - Displays in the warehouse.
  - Demonstrations.
  - Word of mouth via other farmers.
- 3) Ask trainees to "rate" each method as to (a) its impact, (b) speed, (c) coverage of large numbers, (d) cost. Put a table as below on the chalkboard/OHP, and ask trainees to put a "1" for excellent (i.e. strong impact, fast, good coverage and low cost), "2" for adequate or "3" for poor (i.e. weak impact, slow, few farmers covered and expensive), by each method, for each characteristic. The fig-

ures in the table below are one suggestion. They should not be shown to trainees and are only given as an indicator of what is required.

Method	Impact	Speed	Coverage	Cost
Meetings	2	1	2	2
Posters	3	1	1	1
Contact by Staff	1	3	3	3
Letters	2	2	3	2
Advertisements	3	2	2	2
Display in Warehouse	3	2	3	1
Demonstrations	1	3	2	2
Word of Mouth	1	3	1	1

- 4) Refer to the previous session. Play or enact the answers by farmers A to J over again. Stop after each answer and ask trainees to suggest which method or combination of methods of communication would be most appropriate in order to persuade the particular farmer to buy his supplies from the Utopian Farmers' Society. Opinions will differ, but a possible list of suggestions is as follows:

Farmer A, mistrustful	word of mouth and meetings.
Farmer B, ignorant	posters, letters and meetings.
Farmer C, disappointed	individual contact and posters.
Farmer D, frightened	individual contact and word of mouth.
Farmer E, unconvinced	display and meetings.
Farmer F, complacent	individual contact and posters.
Farmer G, insecure	meetings and word of mouth.
Farmer H, resigned	word of mouth and posters.
Farmer I, confused	posters and meetings.
Farmer J, convinced	display and meetings to re-affirm conviction.

- 5) Trainees may suggest meetings, warehouse display or demonstration for farmers who at present have no interest in the buying from the society. Remind them that an effective method of promotion for such farmers must "reach out" to them and make an impact, since they will not attend a meeting or visit the warehouse.
  
- 6) Ask trainees which methods of communication are used by their societies. How effective are they? Are other effective methods available but not used? Is effective communication confined only to those who are already convinced (such as those who attend an annual general meeting)?

SESSION 9.3PROMOTION CAMPAIGNS

Objective: To enable trainees to select appropriate promotional methods and effective types of messages for promoting particular goods or services.

Time: 2 - 2 1/2 hours.

Material: Case study.

Session Guide:

- 1) The two previous sessions have focused on the individual who is reluctant to change, and on appropriate ways of reaching him or her. It is necessary to understand the various reasons why members may not behave as we would wish, and to know how to persuade them. Usually, however, a promotional campaign has to be planned to reach every member and a different approach cannot be tailormade for each person.
- 2) Ask trainees to imagine themselves finding it necessary to persuade members to buy more of a particular product, to use a product in a particular way, to complete a certain application procedure, or some other farm supply promotion task. What would they do first?
- 3) Trainees may refer to the previous sessions and say that they should select a promotional method. Show by example that this may not be correct, and elicit, or introduce, the following procedure:
  - a) Determine the objective of the whole task.
  - b) Identify that part of the task which can be carried out by promotion (as opposed to delivery, price concession, special packaging or the product itself) and determine the objectives of the promotional part of the task.
  - c) Decide, or find out, why members are not at present doing what the society wants them to do. Are they afraid, ignorant, suspicious, or what?

- d) Decide what the message should be, and what motive it should appeal to.
  - e) Select an appropriate method or mix of methods of communication.
  - f) Design the actual poster, plan the meeting, write the letter or whatever.
  - g) Implement the promotion.
  - h) Evaluate its effect.
- 4) Divide trainees into four syndicates. Distribute the case study and allow up to one hour to complete the assignment. If time is short, allocate the four problems to different syndicates so that each syndicate only had one problem to deal with. Ensure that trainees read all the problems before the results are presented.
- 5) Reconvene the group. Each syndicate should present their solution to one problem only. Opinions will differ, and no one answer is correct. Do not draw out the session unnecessarily by asking each syndicate to present every problem.

Possible answers might be:

a) The Cattle Disease

Promotion Objective: To inform all farmers with cattle about the disease and to persuade them to come to the co-operative warehouse to learn about the medicine and purchase it.

Reason for present behaviour: Ignorance of the disease, or of the possibility of a cure.

Benefits to be stressed: Freedom from fear.

Medium to use: Posters and advertisements.

Evaluation: Numbers of farmers who come to the warehouse, inquire about the medicine and actually buy it (not total sale, which may be due to a small number of large purchasers).

b) The New Variety of Maize

Promotion Objective: To encourage farmers to attend demonstrations where the new variety has been sown and is described.

Reason for present behaviour: Ignorance, misunderstanding or inertia (inactivity, resistance to change).

Benefits to be stressed: Financial gain and reputation as a progressive farmer.

Medium to use: Posters, word of mouth, individual contact and display in warehouse.

Evaluation: Attendance at demonstration plots (members will actually start growing the new maize if the demonstrations are effective; promotion alone cannot be expected to achieve this).

c) Low Cost Tools

Promotion Objective: To encourage members to come to the warehouse and see the tools for themselves.

Reason for present behaviour: Ignorance of the availability of the tools.

Benefits to be stressed: Money saving.

Medium to use: Posters, advertisements and displays in the warehouse.

Evaluation: Number of inquiries about special offer tools.

d) General Sales Increase

Promotion Objective: To increase (a) number of members purchasing, and (b) total sales made to each.

Reason for present behaviour: Ignorance, fear, misunderstanding or inertia.

Benefits to be stressed: Financial gain, loyalty and security of own society.

Medium to use: Meetings, posters, personal contact and word of mouth.

Evaluation: Record and monitor sales and numbers of customers purchasing per week, month or as appropriate.

6) The following points should be stressed during the discussion of syndicates' solutions:

- Promotion alone cannot achieve the complete task. Its role must be clearly defined, and must be co-ordinated with distribution,

product availability, price, training, packaging and other "ingredients" of the marketing function.

- Members do not buy fertiliser or anything else for the fun of buying it. They hope that certain benefits will result from its use, so the promotional message must not "sell" the product alone, but should stress the benefit that will be gained as a result of its purchase.
  
- Promotion must be carefully evaluated in relation to its objectives. If the total task is, or is not, successfully completed, promotion may, or may not, have played its proper part. It must therefore be carefully evaluated in order to improve future performance. To do so, the effect of other aspects, such as product quality, distribution or price, must, if possible, be separated from the evaluation of the promotion itself.

The Four Tasks

The secretaries of four different farmer co-operative societies were faced with four supply tasks.

Secretary A - The Cattle Disease

A dangerous cattle disease is spreading quickly through the country and a few members living in outlying areas have already lost cattle. The Veterinary Department has informed the society that the disease can be cured if farmers are taught to recognise early symptoms and are able to obtain and use a special medicine which has to be carefully administered over a three week period. Stock of the medicine is to arrive shortly at the society's warehouse, and the manufacturer's representative has instructed the head storeman on its use. The committee of the society has decided that every potentially affected member must be able to obtain and use the medicine correctly within the next four weeks.

Secretary B - The New Variety of Maize

The Ministry of Agriculture has recently released bulk supplies of a new variety of maize, which is expected to increase yields by up to 15% in farms of the type cultivated by the members of Society B. Correct fertilisation and cultivation is vital for success, and the society's extension officer has been on a course to learn how this should be done. A few members have heard of the new variety through the press or radio, and have been asking for supplies. Most have probably never heard of it. The committee of the society has decided to attempt to introduce the new variety to at least 20% of members by next season and 50% the season after that.

Secretary C - Low Cost Tools

The secretary of Society C has been fortunate enough to be able to purchase from a bankrupt distributor a large supply of farm tools, such as hoes, spades, knives and rakes. The tools are of the same quality as those normally used by members, and can be sold at about one third less than the normal prices.

The quantity is sufficient for about one and a half years' normal consumption. The purchase was made for cash, and it is important that the tools should be sold quickly in order to restore the cash balance of

the society. The committee has therefore decided to offer the tools at one third of normal prices for six weeks only, in the hope that most, if not all, of the tools will be sold during this period. If any are left, they can be disposed of thereafter. The secretary has been asked to prepare a plan in order to achieve this.

#### Secretary D - General Sales Increase

The committee of Society D is concerned that insufficient members are making use of the society's Farm Supply Service, and many of those who do buy from it purchase only a small proportion of their total needs. The society stocks most of the inputs members need, and prices are very competitive. Some members are possibly not fully aware of all the things they can buy, or have traditional connections with private traders which are hard to break. The committee has decided that the situation must be improved. They have asked the secretary to produce a plan which will achieve a 50% growth both in the volume of sales and in the number of regular purchasers during the next twelve months.

#### Assignment :

For each society, answer the following questions:

- 1) What should be the objective of the promotional part of each plan?  
(N.B. You need only concern yourself with promotion, and its task within the total task.)
- 2) Why are members currently not doing whatever it is that their society wants them to?  
(i.e. not dosing their cattle, not buying the tools, etc.)
- 3) What benefits should the promotion stress?
- 4) What method(s) of promotion should be used to communicate the message to members?
- 5) How should the effectiveness of the promotion (not the whole programme) be evaluated?

topic

**10**

# action learning and commitment

10.1 Action Learning and Commitment

SESSION 10ACTION LEARNING AND COMMITMENT

Objective : To enable trainees to apply what they have learned to their own situation, to develop a solution to a specific problem with the assistance of the group and to commit themselves publicly to its implementation by a given time.

Time : Minimum one day (8 hours).

Session Guide :

Trainees should have been warned at the beginning of this course that at the end they would be expected to describe a specific problem facing them at work, and to develop and present a solution to the problem that they will implement on their return home.

They should have been reminded of this constantly throughout the course, and of the need to identify at least one problem which the course will help them to solve. This final day gives them the opportunity to develop a solution to this problem, using what they have learned during the course and in consultation with a number of other trainees, and then to present the solution to the whole group for criticism and comment.

The problems and their solutions will of course be unique to each trainee and his organisation, but typical examples might be as follows:

- Problem: Members are reluctant to buy anything from the co-operative other than fertiliser, seeds and other items which are part of the society's annual credit package. The society stocks many other important supplies but members rarely buy them.
- Solution: I shall carry out some simple research through meetings and interviews to identify the reasons for members' failure to buy more from the society. I will analyse the reasons, and take corrective steps in terms of

adding new items, changing prices or other changes, and shall implement appropriate publicity programmes by August 30th at the latest.

- Problem: Once a supplier has been chosen by the society, he continues to receive bulk orders almost indefinitely, even though his service may decline and better products become available.
- Solution: I shall institute a simple procedure for supplier evaluation. Every contract of \$1,000 or more will automatically be put out to tender every year. The results of the evaluation system will be used in the selection process. Files will be kept for each product, to record every quotation and supplier's performance. This system will be operating by January 1st.

The time available should be divided into two sections. During the first section, trainees should work in syndicates of at least three people. Each trainee should have a minimum of 30 minutes to describe his problem to his syndicate and to discuss and develop with their advice a solution, together with a timetable for its implementation. Syndicates should be made up, if possible, in order to exclude people from the same society, and to include a range of skills and experience. Trainees should be encouraged to regard their 30 minutes or more as a consultancy opportunity, during which the accumulated expertise of their colleagues is freely available to them.

During the second section, each trainee should have at least ten minutes in which to present his problem and its solution to the whole of the rest of the group, and to hear and react to at least a few comments and suggestions.

Even in this brief period, every trainee must be sure to:

- Describe the problem.
- Describe the solution.
- Describe how the solution will be "sold" to whoever is involved.
- State a specific date by which a specific part, or the whole, of the plan will be completed.

### The Four Tasks

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#### Secretary A - The Cattle Disease

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(N.B. You need only concern yourself with promotion, and its task within the total task.)
- 2) Why are members currently not doing whatever it is that their society wants them to?  
(i.e. not dosing their cattle, not buying the tools, etc.)
- 3) What benefits should the promotion stress?
- 4) What method(s) of promotion should be used to communicate the message to members?
- 5) How should the effectiveness of the promotion (not the whole programme) be evaluated?

(Trainees who are in charge of a society may feel that it is unnecessary to "sell" their ideas, because subordinates will in any case do what they are told. Trainees should be warned in advance of this error. Subordinate staff may do what they are told because they are frightened of the consequences if they do not, but they will not make their full contribution, unless they are convinced of the advantages of doing whatever has to be done.)

Trainees should be encouraged to arrange to meet each other at work after the course, and if possible a series of small group consultancies, based perhaps on the action commitment syndicates, should be set up. The instructor should also undertake to visit or otherwise contact each trainee around the promised date of completion of the plan, in order to ascertain whether or not it has been implemented. It must be stressed that this is not in order to evaluate the trainees, but the training course itself.

If possible a brief reunion should also be arranged, to take place after an appropriate interval. If this can be done, trainees should be asked to state in this session exactly what they plan to have achieved by the date chosen for the reunion, so that they can on that occasion compare progress with the stated intention. This is not only a useful evaluation device, but, more importantly, the public commitment and knowledge of the forthcoming reunion will be a powerful incentive to actual implementation.

The allocation of time within the period will obviously depend on the number of trainees and the time available. It is important that whatever timetable is selected, it should be closely adhered to, since otherwise some trainees may be deprived of the chance to discuss their problem within their syndicate or to present it to the whole group. These may very well be the more reticent members of the group, who can most benefit from the experience.

Possible timings are as follows:

- 16 Trainees Six Hours:

First Section: Three hours in four syndicates of four, each having forty-five minutes for discussion of his problem.

Second Section: Three hours in plenary session, each trainee having approximately ten minutes to present his solution.

- 20 Trainees Six Hours:

First Section: Two and a half hours in five syndicates of four, each trainee having about 35 minutes for discussion of his problem.

Second Section: Three and a half hours in plenary session, each trainee having approximately ten minutes to present his solution.

If more than 20 trainees are in the group, it may be necessary to allocate more than one full day for this exercise. This will be time well spent, since this period can provide an effective "bridge" between the course and the real world, and ensure that trainees regard the completion of the course not as the end of the training period, but the beginning of personal improvement on the job.